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The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY

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LOOKING AHEAD
. . . with the Editor

CALIPER well logging, or measuring the size of the bore hole of an oil well, although not an entirely new development, is of comparatively recent introduction to the industry. Since the first hole was thus logged, however, the importance of accurately determining and knowing the size of the hole at any given point has increased and become so essential in various operations connected with oil production, that this information is now indispensable.

For many years it was known or suspected that the size of a bore hole is frequently different from that of the bit which cuts it. The problems associated with caving formations were encountered very early in cable tool drilling when it was learned by measurement of the volume of cuttings recovered by the bailer that some formations cave while others stand.

Gradually, the rotary method of drilling was developed to overcome the instability of unconsolidated sands and shales, particularly in the Gulf Coast. Because it was inferred by rotary drillers that the new method probably suppressed caving almost completely, the uniformity of the hole diameter was taken more or less for granted.

This erroneous assumption was gradually dismissed when more experience was accumulated, but it was only in 1940 when actual hole size measurements were made in long-open sections of rotary bore holes that a clear picture of the actual size of the bore was obtained.

Hubert Guyod, of the Electrical Well Services Laboratory, Halliburton Oil Well Cementing Company, begins a fascinating discussion of caliper logging in the August 27 issue.

The OIL WEEKLY

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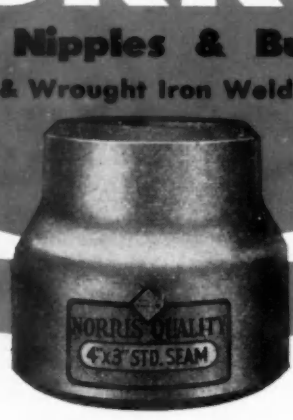

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The Changing Panorama

Antidote Offered for Oil Famine Thinking

AS AN antidote to thinking about an oil famine in the United States, consider the following statistics on prospective oil acreage, compiled by Standard Oil Company (New Jersey) geologists, a few years ago:

Continental United States, excluding Alaska, contains some 960 million acres of prospective oil land. How much of this acreage is already under lease can hardly be estimated, but a good guess is that the total is well under 25 percent.

Figures compiled by the Temporary National Economic Committee, showed that in 1938, the 20 largest operators in the industry held some 56 million acres under lease, or about 6 percent of the 960 million acres of favorable oil land.

No doubt, present day totals would vary somewhat from the above estimates. It has been found, however, that the process of leasing, testing, and then either surrendering the lease or developing it is an ever-changing picture. A survey made by The Carter Oil Company revealed that the average lease taken out by that company was either tested or surrendered as unattractive in less than four years.

A similar survey by Standard of New Jersey covering the five-year period from 1938-42, showed that acreage was turned over to the extent of nearly 70 percent, that is total surrenderings were 70 percent of total purchase of leases.

The greatest possible utilization of all energy and power contained in a barrel of crude oil is important in view of the increasing difficulties experienced by the industry in discovering new reserves of crude oil.

—WILLIAM F. HUMPHREY, *President*, Tide Water Associated Oil Company.

Where Postwar Oil Cutback Will Fall

MOST of the cutback in United States crude production that must occur with end of military requirements will fall on Texas fields. If demand for United States oils drops to the 1941 level, as generally anticipated, output must be curtailed by one million barrels daily. Under these circumstances, Texas production probably will be reduced by a half million barrels or more daily.

California yield is likely to be reduced 300,000 barrels per day. It is very doubtful if Louisiana, Oklahoma, New Mexico and Arkansas will account for more than 100,000 barrels. This would leave a cutback of 600,000 barrels daily that can be achieved only in Texas.

Quicker Reconversion Process Is Foreseen

PEACE is going to bring many economic dislocations. Sudden ending of the war means all plans for gradual reconversion must be discarded. There will be sharp declines in industrial production and profits. However, there is a growing belief that reconversion may not take as long as many heretofore have predicted.

Undoubtedly this belief is encouraged by indications that government controls are to be lifted as quickly as possible, which means immediately on all but scarce materials. The latter will be directed to the more vital channels—cars, refrigerators, etc. The industrial problem will be one of clearing out government machines and retooling for civilian goods. The shortage of steel will end at once. Shutdown of plants for retooling will give time for building up adequate metal inventories.

Competition will force business to do everything within its power to get back into civilian production quickly. If government controls do not hinder their efforts, the reconversion period can be of very limited duration. This would be of great significance to production output, profits and employment.

As an example of what some expect in the way of speedy reconversion, some are predicting at least 500,000 automobiles can be built in 1945—double the output planned previously. This would mean early 1946 should have automobile production at or above the prewar rate of 4 million cars annually.

If automobile manufacturers succeed in reaching this volume, gasoline consumption—hence crude oil production—may rebound quickly from its war-end slump.

Science and Its Search for Power

IF SCIENCE continues to make the progress it has in recent years, petroleum, natural gas, coal and electricity may become obsolete as the world's source of power. Much progress in this direction has been made during the war.

The Germans certainly found out how to make good synthetic motor fuel. Other countries also have depended upon synthetic fuels. Coal, wood, shale and agricultural products have been used to make motor fuel. Research along these lines will continue. Synthetic fuels may become a competitor of natural fuels in the future.

Now comes atomic power, which according to claims may some day make all known forms of power generation obsolete. The amazing wartime progress in atomic power opens an entirely new field. Unquestionably, atomic research will be a widespread postwar endeavor. Who knows what may be developed, now that it has been proved a possibility?

Tied in with these developments is the advent of jet propulsion, which offers a new type prime mover. Here is another development that may have far-flung influence on future fuels.

It has long been contended by some that technological advancements would always provide sources of power and energy, and that new or improved sources might be developed before supplies of any of the depletable resources were exhausted. Amazing wartime progress has brought this belief into the actual picture.

In view of these possibilities, it is unreasonable to argue that any commodity be denied the right to a market. In this light, the current effort to restrict the use of natural gas is unsound. Conservative estimates of the nation's known natural gas reserves indicate a supply sufficient for 50 years. How to advance the current utilization of our gas resources would be a better consideration.

Lubrication Study

ANNOUNCEMENT that lubrication of jet propulsion engines is accomplished by a mist-like spray consisting of 95 percent chilled compressed air and 5 percent oil, by engineers of Shell Oil Company, recently, gives cause for speculation as to whether the whole field of lubrication may not be due for startling developments. Of course the jet engine introduces an entirely new set of problems for the lubrication engineer. Out of his research, however, is likely to come knowledge that will be of much benefit to the more common aspects of lubrication.

After Victory . . . What?

By RAY L. DUDLEY, Publisher

ONLY if some very large new fields are discovered is there likely to be more than 27,000 to 30,000 wells drilled in the United States during the first year after the close of the war with Japan, a survey of petroleum industry opinion by THE OIL WEEKLY reveals. This would compare with 27,000 in 1945 and an average of 30,000 well completions in the five years preceding the war.

However, the same inquiry indicates postwar wells will be deeper, and consequently such a drilling program would be equivalent in equipment purchases to a considerably larger number of prewar or even wartime wells. Postwar expansion of secondary recovery projects, gas conservation installation, enlarged drilling programs abroad, and heavy pumping purchases are indicated by the replies.

In making the inquiry THE OIL WEEKLY forwarded to 17 executives of major oil companies a synopsis of its own views as to prospects for the first postwar year and asked for comments on them.

A number of factors were advanced for the conclusion that drilling may not be as large as some have predicted. Among the factors advanced were the influence of: probable substantial reduction in income through crude oil production cutback; effect of a changed tax setup; higher drilling costs; the crude price situation and lack of high grade locations and prospects. The reserve situation came in for considerable comment. Possible adverse effect of heavy crude oil imports was mentioned.

Only the discovery of very important new fields will likely cause more wells to be drilled than the 27,000 to 30,000, it was thought. While one company executive said that he thought the figure would be even lower than the 27,000 to be drilled this year (his estimate was 25,000) a heavy majority of those replying said that they thought that 27,000 or 28,000 to 30,000 wells would be likely.

Influence of Wildcat Prospects

Although it is anticipated that exploratory work will be conducted on what prior to the war would have been considered a large scale, most of the oil men who contributed their opinions expressed the belief that during the postwar year the percentage of wildcat wells to the total number of wells drilled would be down substantially as compared with this year. The tax situation, general financial condition, etc., and a declining curve on geophysical results were named as contributing factors.

Some of the letters emphasized the lack of first class drilling prospects. Since most drilling is done in proven areas the outlook on larger fields was given as of prime importance. Unless some major fields of the size of Hawkins, Fullerton, and Tinsley are found, one man wrote, the prospects for heavy increases in drilling over the 27,000 to 30,000 are small.

Comparatively Few "Fill In" Wells

THE OIL WEEKLY's synopsis advanced the thought that due to the curtailment of drilling and wide spacing during war years, the industry would likely "make up" in part for these "lost wells" and show a substantial increase over the 27,000 to 27,500 wells in prospect for this year. However, the consensus was that wells were drilled too closely in prewar years, that wider spacing is here to stay, and that while there will be some "fill in" wells drilled when present acreage restrictions are withdrawn, the amount will not be important.

While THE OIL WEEKLY is not wholly in accord with the general idea that the industry will not make up in considerable part, over a period of years for the drilling lost during the war, it agrees with the opinions expressed by the 17 men who answered our query that the point probably has been overemphasized and that other factors are of such importance as to take prior position in the plans of the domestic oil industry.

Crude Reserve Situation

The crude reserve position of the nation was seen by the majority as encouraging drilling, because of the need for finding more oil. In its synopsis, THE OIL WEEKLY stated that unless important discoveries were made during the latter part of the year the nation's crude reserves would decline, and that this

As Industry Leaders See the Dove of Peace

should encourage drilling. Most of the replies agreed with this view, commenting upon the poor quality of recent discoveries, and the need for finding more oil to maintain producing ability.

However, there were two who did not think the crude reserve situation unsatisfactory. One executive asserted "The reserve situation is not critical and may be regarded as satisfactory." Another wrote that he doubted if there was any justification for the statement that discoveries have been discouraging during the war years. "The way reserves are computed, and properly so I believe, leaves us with many discoveries during the past eight years that have never reached their peak," he concluded.

Probable Postwar Demand

The close of the war with Japan will see a crude oil production cutback of around a million barrels a day. These are figures compiled by THE OIL WEEKLY's own staff and they are in fair agreement with estimates released by the Standard Oil Company of New Jersey recently. Most of the 17 men who made comments on the prospective situation expressed agreement with THE OIL WEEKLY's estimate although four thought that the estimate of a million barrels per day might be too high.

First to feel the impact of the cutback will be the heavy oil fields of the United States of America and those of Venezuela where the war demand has stimulated production to an even greater percentage gain than the United States. Consequently Texas, Louisiana and California will feel the impact most heavily in the United States.

Two executives were bullish on the time to be required in restoring the gasoline demand to its prewar domestic consumption level. One thought that it would come quite quickly and, in fact, be almost at its prewar point by the close of the war.

On the other hand, others expressed the belief that it will be close to four years before the domestic oil demand will be restored to its prewar level and it is THE OIL WEEKLY's opinion that somewhere between two and four years will be required.

There is no question as to the effect of the production cutback on drilling prospects. A drilling campaign of unheard-of proportions would be likely if the demand for crude oil did not fall off after the war, and consequently a drastic production cut, such as is expected, will likely prevent such a campaign, it was thought.

The Financial Situation Factor

The drop in production will, unless there is a price increase, be accompanied by a heavy reduction in the income of oil companies and that reduction in income will affect the drilling campaign in prospect. Practically all the executives were in agreement on this point.

Tied in with this is the tax situation. Most of the companies expressed the belief that with a change in the tax laws reducing the excess profits tax, exploratory drilling will be materially reduced and oil companies will be unwilling to take on any drilling expenditures not absolutely necessary.

There is another side to this, however. Many companies hold large blocks of land under lease. One company has more than 15 million acres under lease, of which 5 million will expire during the next five years. With the reserve situation as this company believes it to be, it is not likely that the acreage will be released without testing. Somewhat similar situations obtain with other companies, principally on acreage in Texas and Southeastern States, and will at least affect the direction of operations.

What of the Price?

A study of the replies received appears to confirm the opinion of THE OIL WEEKLY, expressed in its memorandum to the oil company executives, that there will not be a price decrease after the war, despite the fact that a sudden drop in production usually is accompanied by market disturbance. None of the 17 prophesied a price cut. None of them prophesied a price increase, although some expressed the belief that there should be some increase.

A price cut, all agreed, would adversely affect drilling operations. One man expressed the thought that a 25 cent price increase might be granted when it was deemed "politically advisable." He was, however, talking of the present situation, rather than a postwar situation.

How About Imports?

In its memorandum to the oil company executives THE OIL WEEKLY expressed the belief that there will be no drastic changes in the import situation in the first postwar year as compared with the last prewar year. No disagreement was expressed with this statement which is, of course, of a controversial nature. One executive, head of a large company with no foreign production, pointed out that the powers that be in Washington might take a different viewpoint and pursue the "good neighbor" policy to the point of lowering the bars, and another offered the suggestion that price increases might tempt imports to come in over a normal tax barrier.

Wells to Be Deeper

None of the 17 men believed that the number of wells to be drilled in the first postwar year will run over 30,000, although all who expressed an opinion as to the prospective depth of the wells were of the opinion that they will be substantially deeper than in the past and consequently will require more equipment and cost more money. One executive said that 30,000 postwar wells *could* drill more footage than 35,000 prewar wells. This general agreement of opinion as to greater depths is borne out by what is happening right now. During the first six months of this year the average footage per well in the United States increased 7.6 percent over the same period last year, and last year's average was deeper than that of 1941.

Secondary Recovery

Mention was made by several of the executives of the prospective demand for secondary recovery equipment, including cycling equipment and gas handling equipment. This coincides with information THE OIL WEEKLY has received from still other sources.

It is apparent from such opinion as was expressed that the gas distillate areas will see heavy expenditures for such equipment.

There was general agreement on the statement that the first postwar year will see substantially increased expenditures for pumping equipment, except in California. West Texas was named as an area where heavy expenditures will be made for such equipment. One operator said that if the present allowable in East Texas is continued in the postwar year (which appears unlikely) it would result in the need for 1000 to 2000 more wells per year going on the pump.

At the beginning of this year THE OIL WEEKLY calculated that 11,953 wells would go on the pump in 1945, but that part of them would be serviced by equipment transferred from other wells, and that in excess of 6800 pumping units, air/gas lifts and hydraulic pumping units would be needed to take care of *these wells going on artificial lift this year*.

Replacement Buying

A factor which also points to additional heavy purchases of equipment is the present condition of most of the equipment in use. Much of it is obsolete. Much of it is worn out. There has never been a time when there was greater need for replacement of the equipment actually in use. Also the signs point to a good demand for improved equipment and for equipment designed for deeper drilling. Prospective labor costs, etc., all suggest the need of equipment which will do a better job than equipment now in use.

Foreign Prospects

We are told on every hand that the close of the war will see heavy drilling abroad.

The drilling campaign in Northern South America has already been stepped up considerably but this is the result of war needs. On the other hand, there is a greater wildcatting campaign under way in Venezuela and Colombia than there has ever been before. Not only is this true of the companies who have been operating there for years, but 1945 is seeing a large crop of new companies going into Venezuela and Colombia with heavy campaigns, most of which are exploratory or semi-exploratory in nature. If these wells, or any substantial proportion of them are successful, this will mean a great deal of proven area drilling in South America. In fact, the entire South American picture is one to cause optimism on the part of a manufacturer of drilling and pumping equipment.

However, it should be pointed out, as it was to THE OIL WEEKLY, that the prospective reduction in crude oil production which will follow the close of the war, will hit Venezuela, particularly the Lake Maracaibo Basin heavy oils, and that this may affect the drilling of proven acreage in the older fields.

Argentina is far behind in her drilling and most anxious to catch up. This she will try to do at the earlies possible moment.

In the Dutch East Indies we are informed that when the Japs are driven out and manpower and equipment are available, around $50,000,000 will be required to rehabilitate the fields alone. Late reports indicate that the Japs are destroying the production properties to

■ CONTINUED ON PAGE 45

Russian Control of Roumania May Create Bigger European Market

OUT of the welter of rumor, supposition and conflicting opinion on the status and future control of Romuania has arisen the conclusion that the immediate destiny of that nation is being shaped to fit snugly into the jig-saw puzzle picture of Russia's objectives—a picture painted in oil on a sturdy base of political and economic domination.

Only Russians and Roumanians know what is taking place between the Dnestr River and the Danube, and, specifically, how and to what extent Roumania's petroleum industry is functioning as a result of Russian control. British, Dutch, French, American and Belgian interests having large prewar investments in Roumania's oil industry have not been permitted to send representatives into the country since its surrender to Russia; nor have they been able to secure reliable information as to the condition of "their" properties.

Of greatest general interest, perhaps, is that of the probable direction of flow of Roumanian oil in the immediate future, and the resulting effect on world markets. Of almost equal interest is the question of ultimate ownerships, comparative national rights and the rationalization of investments in the industry. Consideration should also be given to some justified assumptions as to the extent of physical damage to production, refining and transportation equipment.

Soviet Union likely to take all of little nation's surplus petroleum for long time to come

Russia to Take Oil

Recent developments seem to indicate all of Roumania's crude oil and refined products not actually consumed within that country will be transported to Russia for some time. According to the degree of exploitation, this movement will amount to between 35 and 45 million barrels per year, none of which will enter the western European market as was the case before the war, when Roumania represented the major European source of supply outside of Russia.

Work is already under way on a pipe line from the Ploesti area to the Russian port of Odessa, a distance of 250 miles. Most of the pipe for this project has been secured by taking up the 10-inch line which the Germans laid between Ploesti and Orsova, on the Danube. Another line will be put in from the Bacau

producing area to Odessa. The German-built line from Ploesti to Constanza, and the two older lines from Ploesti to Giurgu will be kept in service. All deliveries thus will be to terminals at Black Sea ports.

Since western Europe is to be deprived of access to Roumanian oil, more will have to be imported from overseas than was imported before the war. The Middle East and Venezuela will bear most of the welcome burden of making up this deficiency, although Europe necessarily will continue to be under-supplied for the time being because of Pacific war demands. By the middle of 1946, however, American and British companies will begin to reap the benefits of the diversion of Roumanian oil to Russia, and will have every opportunity to retain their enlarged market in the future.

Relative Rights

The issue of conflicting "rights" to Roumania's oil can be reduced to terms of ethical principles. In the first place, Roumania's mineral resources were nationalized more than 20 years ago, and rights to exploit her petroleum resources were granted to foreign interests on stiff terms and at their own risk with respect to possible future changes in mining and manufacturing laws. Moreover, Roumanian laws stipulated that oil companies doing business in that country must be so incorporated that majority control through invested funds and directing personnel would be in the hands of Roumanian citizens. In other words, Roumania's oil and her oil industry were not to be relinquished to foreign control. Second, Roumania's "mineral wealth" was and is petroleum. No other minerals figure prominently in her economy.

Next, it should be pointed out that Roumania was a willing partner of Germany in the struggle against Russia, and a very active partner at that. She sent her armies across the Dnestr with the expectation of acquiring permanently a large slice of southwestern Russian territory. Consequently, Russia feels her indemnity claims against Roumania rate a priority over those of any of the other Allied nations; and, since Roumania can pay off only with oil, that commodity is the logical medium of exchange.

U. S. Stake Protected

As for the status of foreign capital investments in the Roumanian oil industry, the American stake, at least (Standard Oil), is protected—no matter what the outcome of reparations negotiations may be. This stake amounts to approximately $36,000,000, compared with Anglo-Dutch investments of some $95,000,000, and approximately $60,000,000 of combined Franco-Belgian funds.

The loss of the American investment can be covered by equivalent income tax deductions, according to specific provisions in the U. S. Revenue Act of 1942. Thus, although the American private capital investment is safeguarded, our federal treasury stands to lose that much revenue, and our government is therefore constrained to file an indemnity claim against "Roumania" in order to collect on the transaction. Russian acquiesence would be required. Presumably, England, Holland, France and Belgium also will try to collect on behalf of their own nationals.

Since Roumania's oil wells and field installations suffered only superficial damage during the war (most of the damage being confined to refineries) it seems safe to assume that the country's *producing* potential is as high as it was before the war. As a matter of fact, it is probably higher, since, under German supervision, every effort was made to apply improved engineering techniques in producing fields in order to boost production for German war needs. Extension drilling was carried on intensively; deep test wells were put down in producing fields, aimed at opening new pays; and a number of wildcats were drilled in new territory. Some measure of success from these efforts must be taken for granted, especially since the prospects were considered to be very favorable before the war, when several companies were planning similar campaigns.

In 1939 there were 35 crude oil refineries in Roumania, although 22 of them handled less than 4 percent of the country's total throughput. Allied bombings, artillery fire and last-minute German stripping of plants are estimated to have reduced overall refining capacity by at least 35 percent. Moreover, most of the damage was done to the larger and most modern plants. The occupying Russians, therefore, having no means of repairing the refineries, could not have put them back into operation had they wished; and since they did not wish to shut down the well they have followed the logical course of sending as much of the oil as possible to their own refining centers. Also, since much of the Roumanian equipment was of value only to the extent that it could be salvaged, the Russians apparently have proceeded to salvage as much as possible, and their need of it is an established fact, as any American refinery contractor can testify.

After Victory—What?

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the best of their ability. Around 50 rigs will likely be running in the East Indies when manpower and equipment permit.

The fields of Burma also will have to be redrilled but that will likely be done with British equipment.

New Guinea has four oilfields which have not been publicized. One of them is of considerable promise and it is likely that we shall see materially increased drilling there when the war is over or before. In fact, development had already started when the Japs moved in.

In the Near East, Egypt is getting an exploratory campaign.

Saudi Arabia will continue to see development. However, due to the size of the wells and the spacing employed, it is not anticipated that drilling will be heavy in the Near East. For instance, only eight wells are considered necessary at this time to increase the production of Saudi Arabia by 100 percent.

Iraq and Kuwait will see continued development after practically a drilling shutdown during the war. As to Iran, we have at this time no information on operating plans. The country has tremendous reserves.

Rehabilitation in Europe

In Europe there should be heavy rehabilitation. What part American equipment will play in it remains to be seen. Before World War II Roumania bought a great deal of American equipment. We are told by one executive that "In Europe, after the war, there will probably be need for considerable drilling and producing equipment; it is very doubtful, however, as to how much of this business will come to the United States because of exchange restrictions. Dollars will be very difficult to obtain and it is expected that every effort will be made to use locally built equipment to the maximum extent. This also applies to any oil producing area that is in the so-called Sterling Bloc. In this connection you will note that, in some of the recently projected pipe line programs for the Near East, the pipe will be made in England. There is some thought that the Bretton Woods Agreement, when finally ratified, may help in this connection but the extent to which it will apply is not yet known."

In view of the fact that there was not much Roumanian manufacture of oil country equipment and that most of the equipment bought on the continent came from that portion of Germany now under American and British control, factories which have been heavily damaged by the war, it would appear that either British or American equipment will have to be used unless the financial difficulties are impossible to surmount. The status of the oil properties in Roumania is not yet clear, as we understand it and what the effect of Russian domination may be is yet to come out.

France has recently (just before and during the war) developed an infant deep oil distillate industry in the South of France. A French Oil Commission has recently been in the United States studying equipment for future operations.

Russia is, of course, a question mark. Russia may make her own equipment, but not if she can get it given to her by the United States. At the present time she is supposed to be getting considerable equipment given her.

Here in North America two countries will likely see additional operations.

All signs point to increased activity in Canada on the part of both Canadian and American oil companies. Canada could easily provide a much better market for equipment than she has in the past.

Mexico is anxious to expand her development and this will likely occur.

Shell Attempts to Assess Damages to Its Properties

Detailed assessments of the damage sustained by properties of the Royal Dutch Company, in occupied countries, have been progressing since the overthrow of Germany. According to the annual report of the company, it is impossible to give an accurate picture of the considerable losses suffered.

In Europe, contact with the Astra Romana, in Roumania, was re-established in September, 1944. The refinery had suffered appreciable damage from war operations, but temporary repairs restored the capacity to about 77 percent of the prewar figure. The fields in this region had not been greatly damaged at the end of 1944 and their daily production was about 85 percent of prewar output.

In the Philippines and other areas liberated in the Far East, plans for reconstruction are well advanced.

Geophysical History of Cameron Meadows

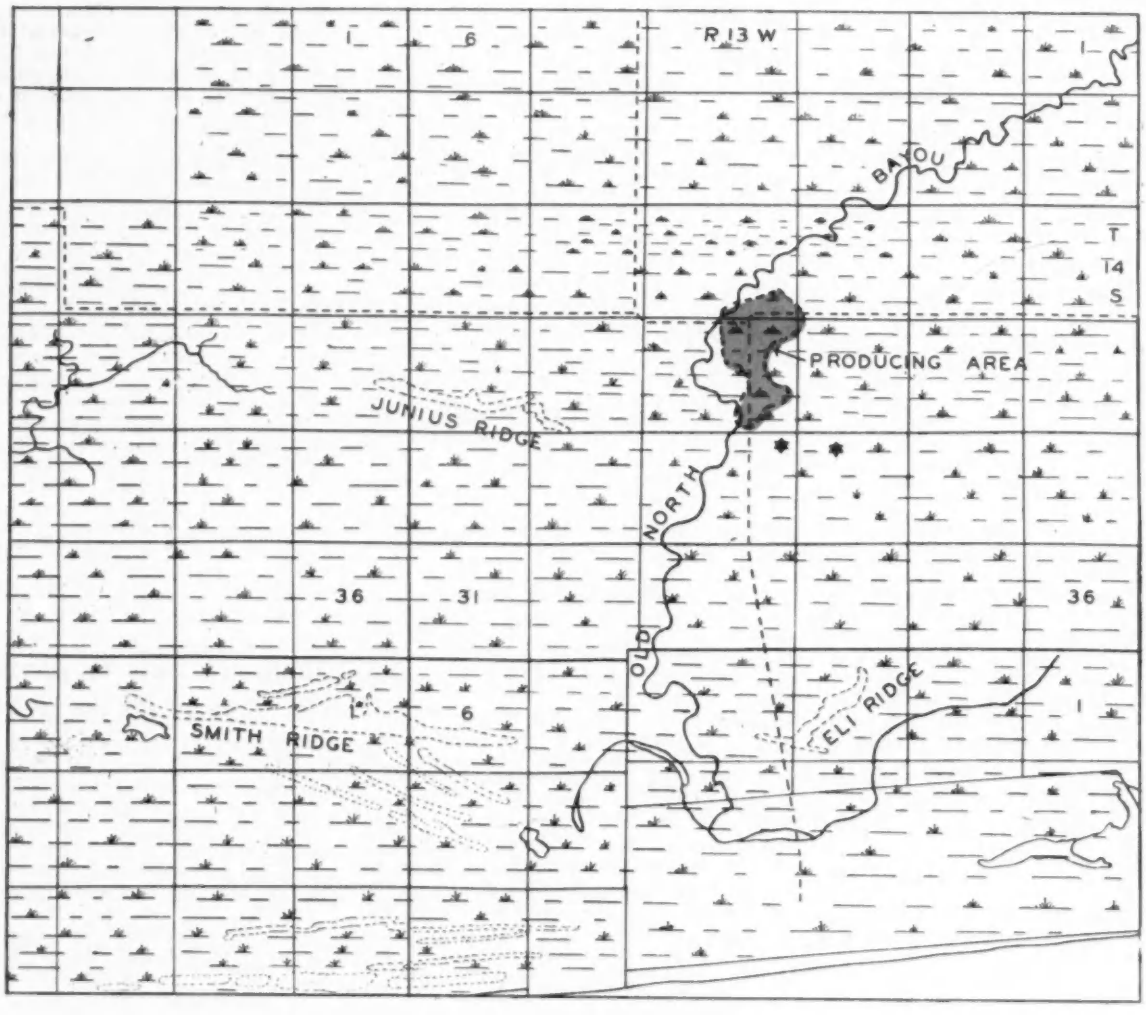


Figure 1. Topographic map of Cameron Meadows, from United States Geological Survey, Cameron Parish, Louisiana. Location of gas seeps shown by solid stars.

By GLEN M. McGUCKIN
Magnolia Petroleum Company, Dallas, Texas

IN ORDER to demonstrate the growth of our knowledge of a typical Gulf Coast salt dome concurrently with development of the science of geophysics, the successive application of various techniques to the exploration of the Cameron Meadows dome is described and illustrated. These methods were: mechanical refraction seismograph (1926); torsion balance (1927); electrical refraction seismograph (1928-29); early correlation reflection seismograph (1929); dip reflection seismograph (1933); special salt profiling refraction seismograph (1942); continuous correlation reflection seismograph (1942); gravity meter (1943).

As the science of geophysics develops, frequently it is profitable to rework an area with new techniques or improved instruments. Our knowledge of the structural picture of Cameron Meadows dome has grown year after year by this application of improved instruments and new techniques.

Prior to any geophysical work, trappers had observed a line of gas seeps in the marsh area two miles east of the east end of Junius Ridge. These gas seepages were known as "boils," being several inches in diameter, stronger than those leading to the Lockport field discovery in Calcasieu Parish, Louisiana. They were known to have continued to bubble in such volume over several years; therefore they seemed to be indicative of a petroleum source, rather than merely marsh gas. Furthermore, the seepages in the northeast corner of Section 28 are sulphur gas, whereas those in Section 27 contain no sulphur gas.

Knowledge of the dome has grown steadily by use of new techniques and new instruments

References in the literature to the Cameron Meadows dome are the two following:

1. "The Cameron Meadows dome was intimated by gas seeps known to trappers in the marshes covering this area. These seeps were brought to (Henry C.) Cortes' attention in March, 1926. At

A similar presentation of this data was made by the author at the fourteenth annual meeting, The Society of Exploration Geophysicists, Dallas, Texas, March, 1944, and is found published in "Geophysics," Vol. X, No. 1, Jan., 1945.

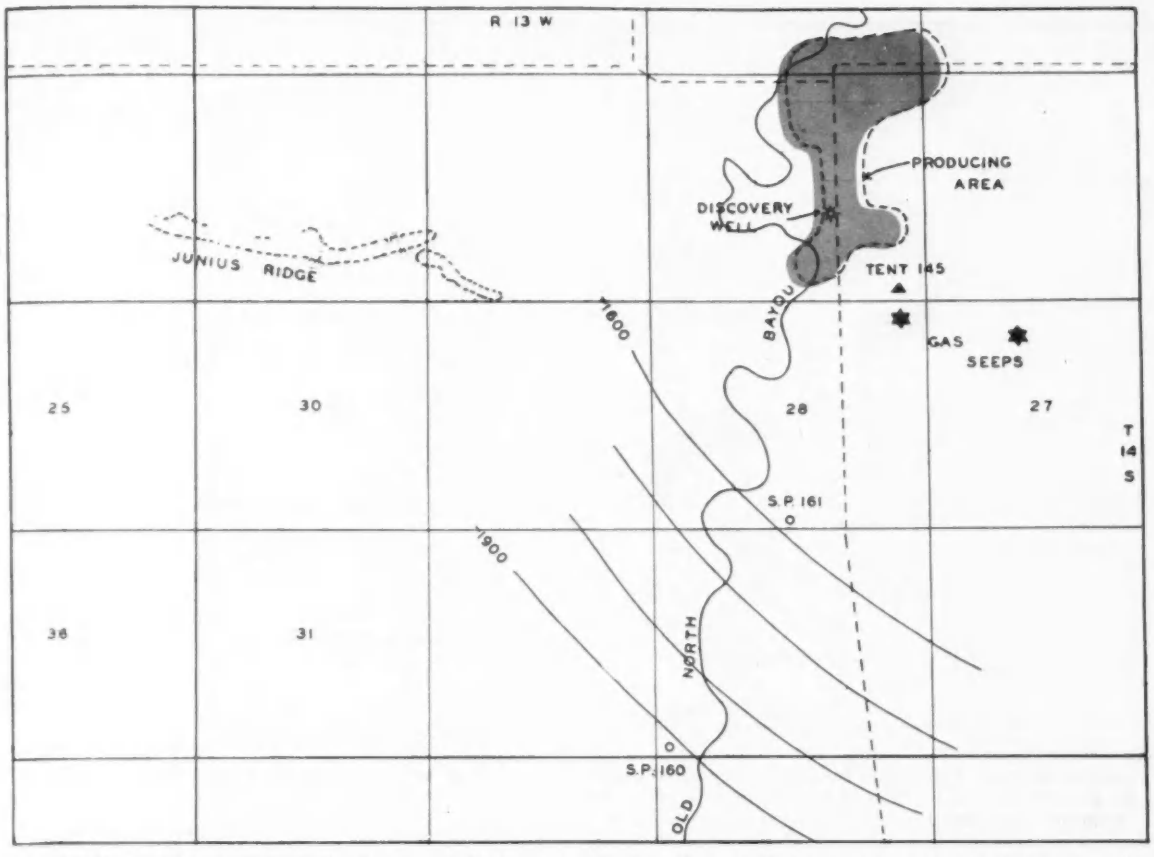


Figure 2. Seismos Company dip indication map, 1926, Cameron Meadows, Cameron Parish, Louisiana. Gas seeps shown by solid stars, recording station ("tent") by solid triangle, shot points by open circles. Contour interval is 100 feet.

the opportune time, leases on more than 18,000 acres were taken by the Vacuum (now Magnolia Petroleum Company) and geophysical work commenced. A significant (torsion balance) gravity minimum indicating deep salt was found which was later confirmed by both refraction and reflection seismograph work."—L. P. Teas, A. A. P. G. Bull., Vol. 16, p. 255, March, 1932.

2. "The dome lies entirely within the area of the Cameron marsh and it has no recognizable physiographic expression from airplane photographs." Old North Bayou pursues a meandering course across the marsh and possibly may be deflected slightly to the northwest in the immediate area of the

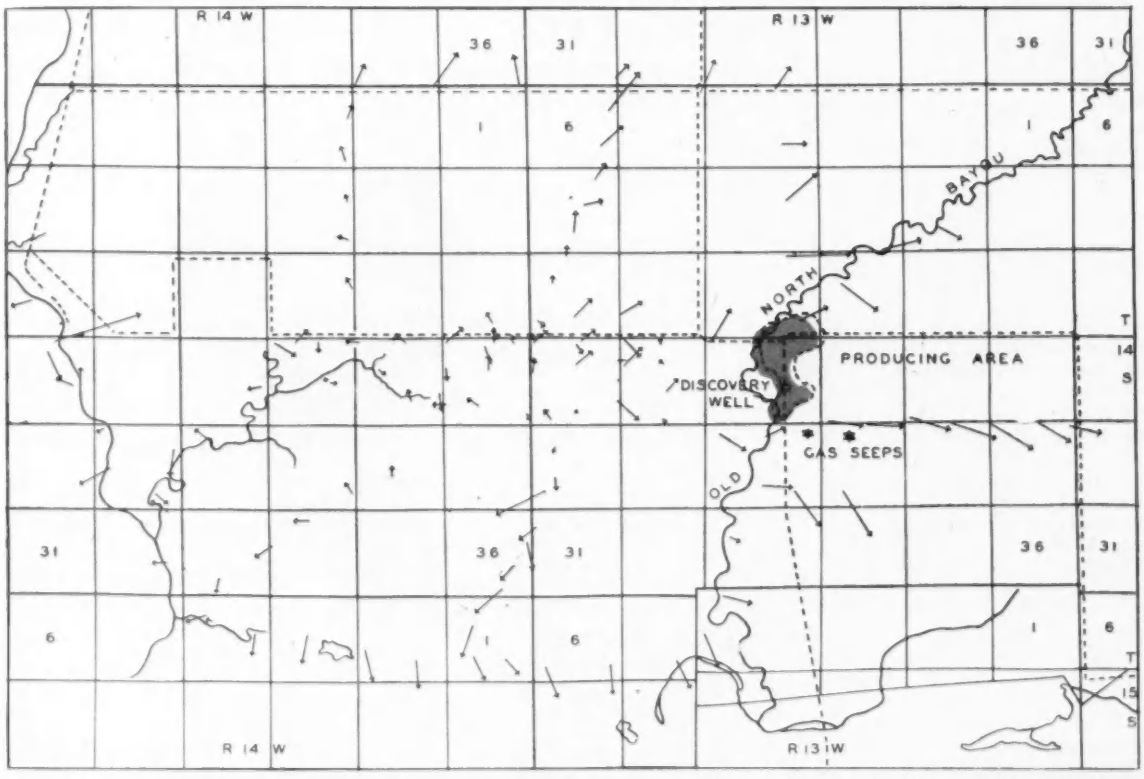


Figure 3. Vacuum Oil Company torsion balance reconnaissance map, 1927, showing observed gravity gradients. Dashed line about discovery well incloses producing area. Other dashed lines are canals.

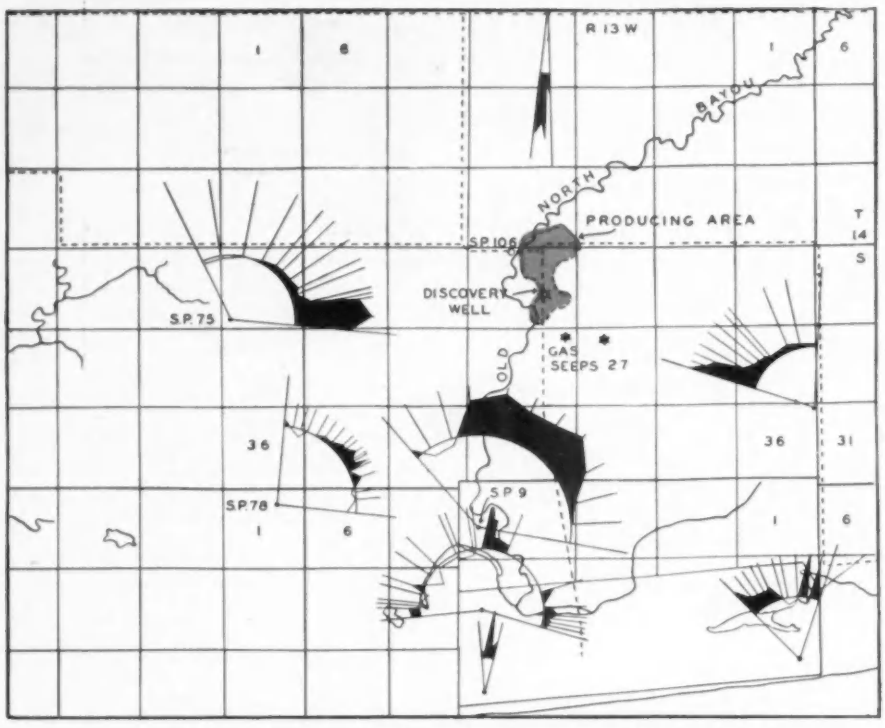


Figure 4. Geophysical Research Corporation 1928 refraction seismograph fans with north and south profiles, Cameron Meadows. Refraction time leads are plotted outward from normal time arc; time lags are plotted inward. (A time lead is the amount by which the observed time at a given geophone is less than the time on the normal profile for the same distance).

dome."—Louisiana Geological Bull. No. 6, Nov. 1, 1935, p. 138.

Figure 1 shows the surface conditions, with the location of the gas seeps marked by solid stars.

The first test on this dome was Vacuum Oil Company's Cameron Meadows 1. After a number of shows from 1000 feet on down, it blew out at 3814 feet, and would have been completed as on oil well at 5248 feet but for mechanical difficulties. It was sidetracked and completed in January, 1931, at 3850 feet, making 50,000 cubic feet of gas and a spray of oil.

Production of the field to January 1, 1945, amounted to 10,381,010 barrels of oil, producing from Pliocene and upper Miocene sands from 1300 feet to 5685 feet in depth.

Geophysical Exploration

The successive steps in geophysical exploration were:

1. Seismos Company mechanical refraction seismograph for a group composed of Calcasieu Oil Company, Union Sulphur Company, and Magnolia Petroleum Company, 1926.

2. Vacuum Oil Company torsion balance, 1927.

3. Geophysical Research Corporation for Vacuum Oil Company.
   a. Refraction seismograph survey—early 1928.
   b. Refraction seismograph survey and
   c. Correlation reflection seismograph—1929.

4. Geophysical Service, Inc., dip reflection seismograph, 1933, for Magnolia Petroleum Company.

5. McCollum Exploration Company refraction seismograph survey by means of detectors in an abandoned flank test 1942, for Magnolia Petroleum Company and Humble Oil & Refining Company.

6. Petty Geophysical Engineering Company reflection seismograph, 1942, for Magnolia Petroleum Company and Humble Oil and Refining Company.

7. Robert H. Ray, Inc., gravity meter regional survey for Yegua Corporation, 1943.

1. In 1926 the Seismos Company was employed by Calcasieu Oil Company to survey large coastal areas, including Cameron Meadows, for a group consisting of Calcasieu Oil Company, Union Sulphur Company, and Magnolia Petroleum Company. They worked in the immediate area of Cameron Meadows from March to August, 1926.

Detailed descriptions of their apparatus leave most of us amazed that they were able to obtain any data at all. The Seismos Company was one of the early German organizations, using a one-channel seismograph which was sheltered from the weather at each location by being set up inside a tent. In places in the marsh they built up a tiny islet of sandbags to support the detector above water. The shot point to detector distance was from 1½ to 4 miles, distances being carefully obtained by a surveying crew. It is of particular interest to note that, from theoretical considerations, they felt sure that no additional penetration was obtained by shooting distances greater than 3½ miles. Also, they considered it impossible to obtain reflections.

Their report consisted of a map showing only tent (recording) and shot point positions, and lines joining corresponding shot point and recording positions, with a descriptive report. The map shown as Figure 2 has had added the contours which graphically portray the depths given in their report, excerpts from which follow:

"More detailed and difficult investigation took place around tent location 145 (Section 21, T14s, R13w. The surface indications around the shell hill of tent location 145, its sudden uplift out of a very deep marsh, and a gas seep south of it, lead to the conclusion that it might be caused by the presence of harder layers. However, the investigations on the shell hill as well as those going north, west and south of it show clearly that no harder layers occur down to considerable depths. The first underlayer was stated in a depth of 1600 feet near shot 161, while it is of 1900 feet near shot 160."

In the conclusions to their report,

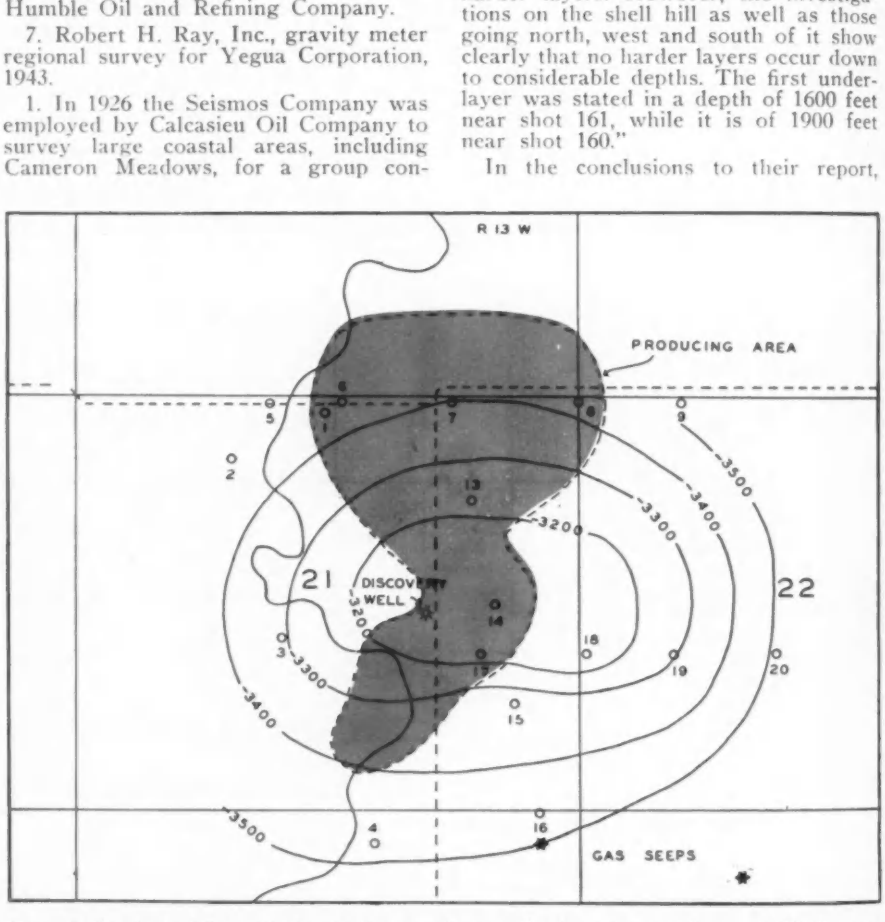


Figure 5. Geophysical Research Corporation correlation reflection seismograph map, 1929, Cameron Meadows. Shot points shown by open circles. Contour interval is 100 feet.

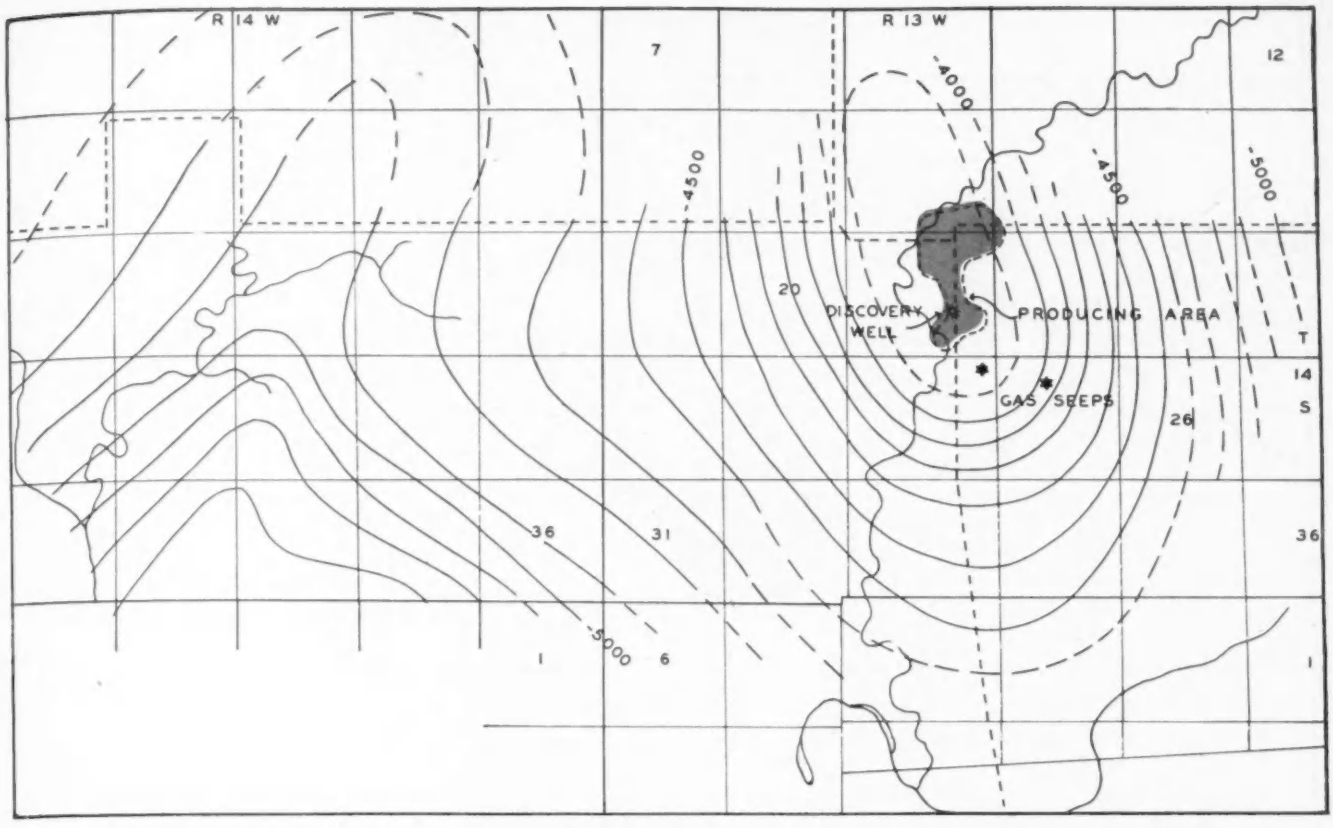


Figure 6. Geophysical Service, Inc., 1933 dip reflection seismograph map. Cameron Meadows. Contour interval is 100 feet.

...wever, they say: "The region around the shell hill in T14s, R13w, tent location, cannot be called fully normal; there may be a possibility to find a structure in Sections 21 and 28 of this region."

Just as it was once predicted "There's no oil west of the Mississippi River," probably most of us have felt in certain instances, after making our interpretation of some current geophysical data obtained by the latest technique, that we had the final answer and nothing more need be done in that area in the future. Seemingly in the same mood, Harry C. Hanszen of Calcasieu Oil Company said, in his letter transmitting the report, "I feel that outside of (certain small areas) mentioned in Dr. Rellensmann's report, the entire area has been thoroughly covered, and when the special work recommended by Dr. Rellensmann is completed (for these small areas) this vast body of land will have been thoroughly tested out with the seismograph." Following the subsequent special work above mentioned, he said, "Briefly, nothing very unusual was found in this special work except a fault in the neighborhood of Shell Hill, just east of Junius Ridge, Sections 21 and 28." This is the location of the Cameron Meadows dome as it developed later.

Vacuum Makes Survey

2. Nevertheless, Vacuum Oil Company, awake to the possibilities of newer techniques, made a reconnaissance torsion balance gravity survey in 1927, the results of which are shown in Figure 3. Station locations were made principally from boats along the banks of streams, canals, and lakes, as were most of the surveys, due to the fact that the surface of this area is covered by shallow water and marsh grass throughout most of the year. In some of the later work marsh buggies were used.

The torsion balance results indicated a large closed minimum anomaly with the gas seepage area on the east nose. On the basis of this reconnaissance work Humble Oil & Refining Company and Magnolia Petroleum Company drilled Cameron Meadows Land Company B 1, in Section 24, T14s, R13w to a depth of 6824 feet and abandoned it, having no favorable indications. This was three miles west of the discovery well on the dome.

3. When the electrical seismograph arrived, with its improvements over the mechanical seismograph used by the Seismos Company, Vacuum Oil Company made use of it in this area. Exploration work was done in three stages:

a. Januady, 1928. The first fan gave

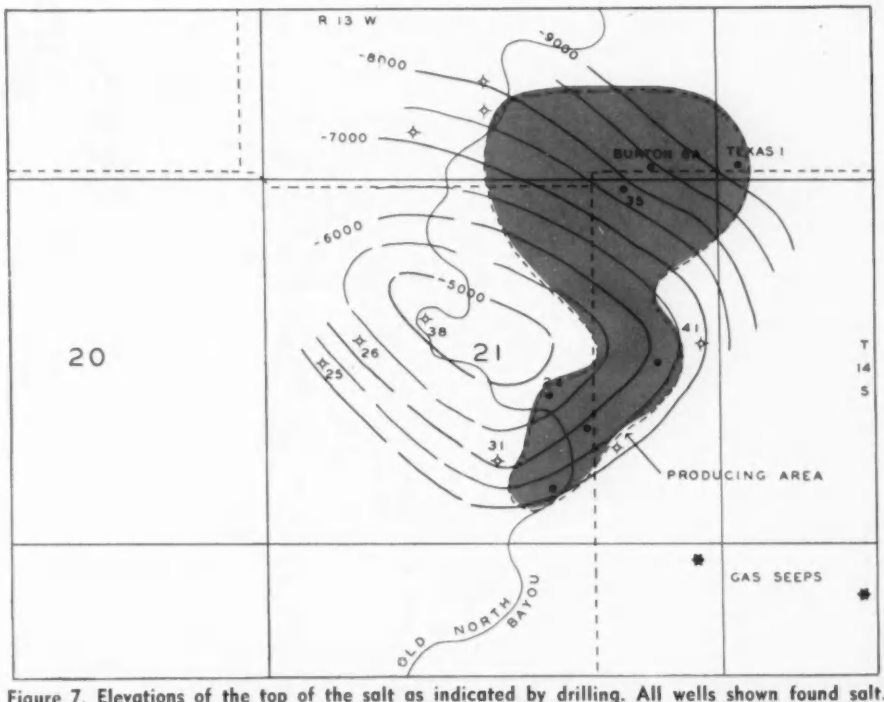


Figure 7. Elevations of the top of the salt as indicated by drilling. All wells shown found salt. Cameron Meadows, Cameron Parish, Louisiana. Contour interval is 500 feet.

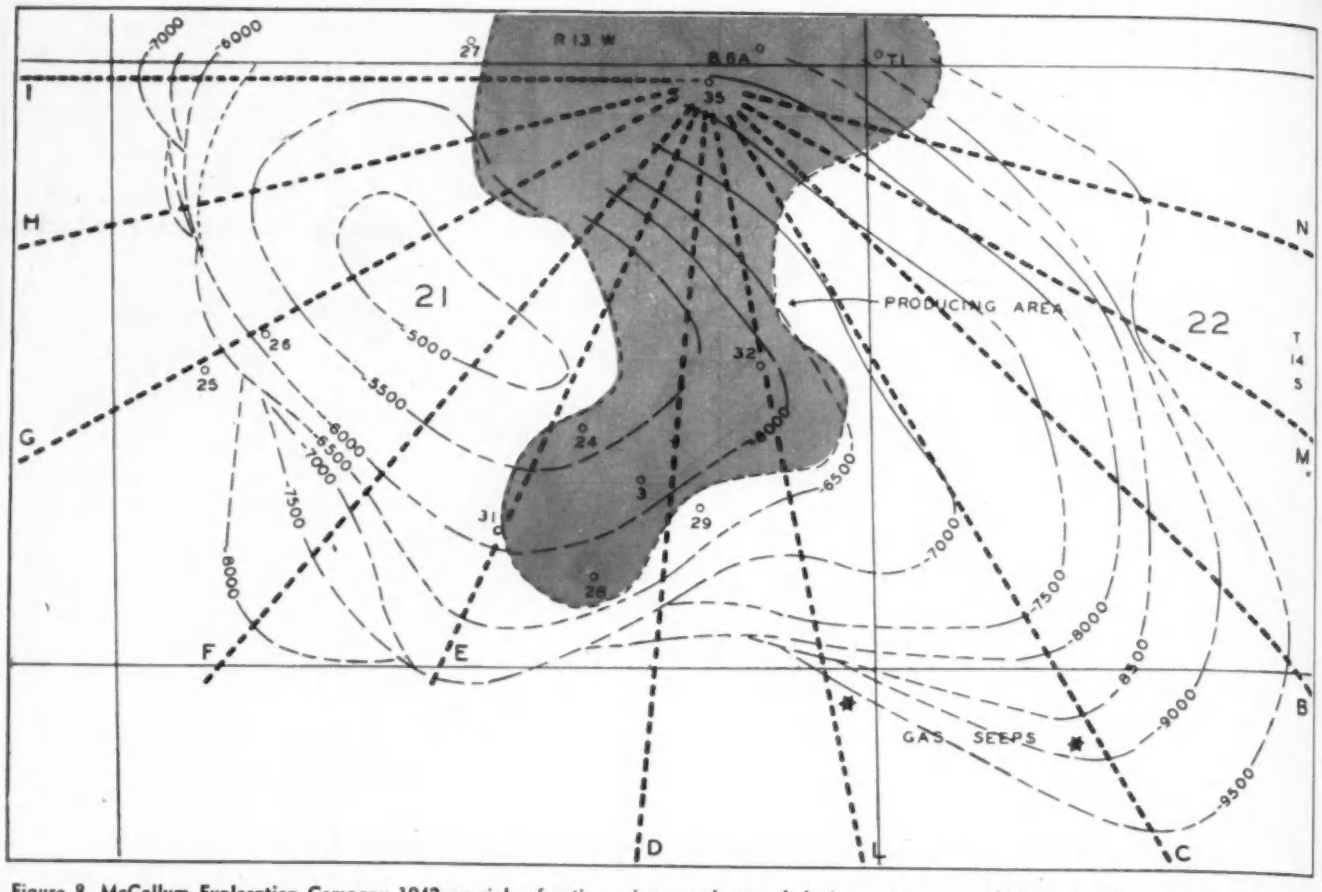


Figure 8. McCollum Exploration Company 1942 special refraction seismograph map deducing contours on salt from recording in well No. 35 from shot points on lines radiating from well. Cameron Meadows, Cameron Parish, Louisiana. Contour interval in 500 feet.

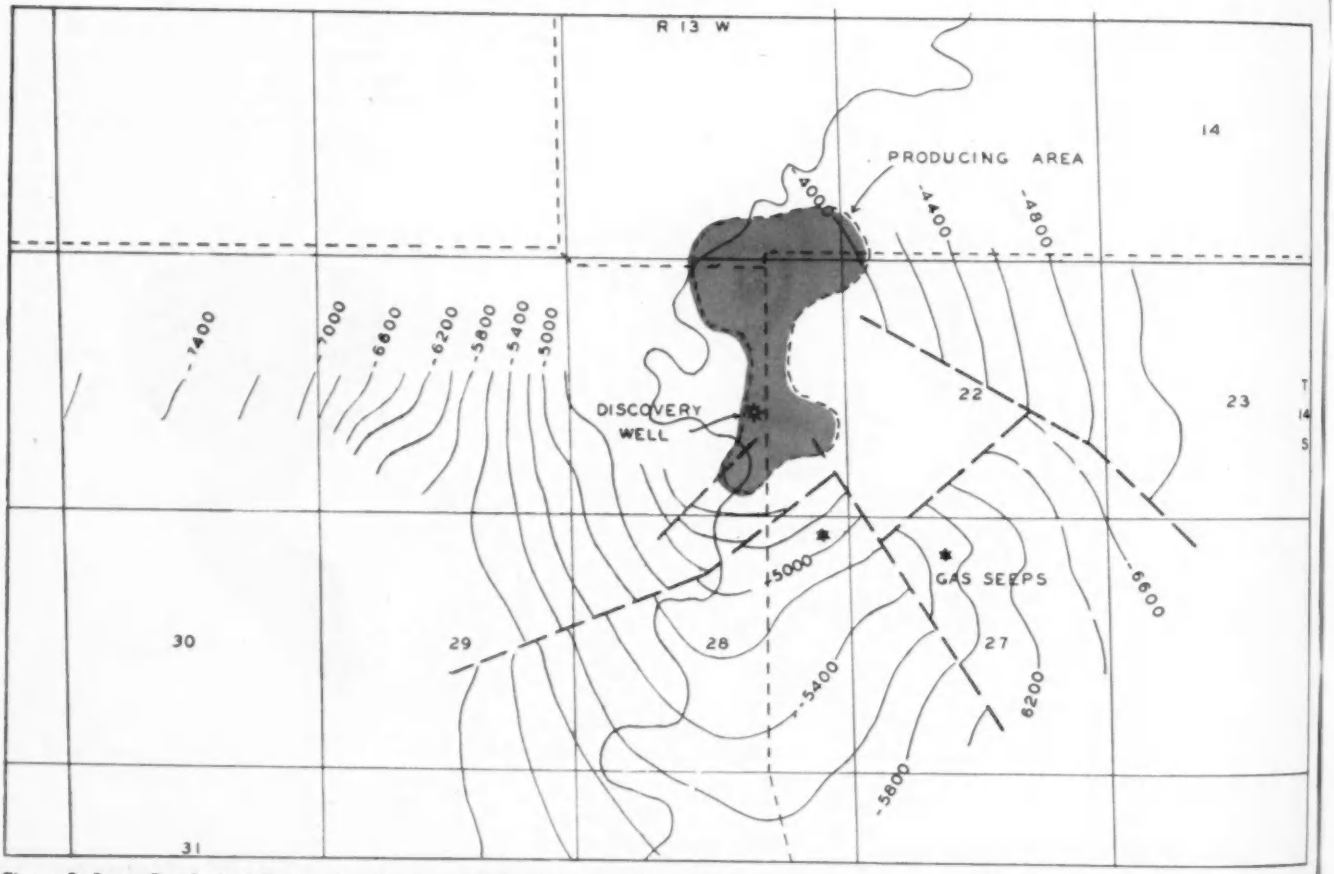


Figure 9. Petty Geophysical Engineering Company 1942 continuous profile reflection seismograph survey, Cameron Meadows, Cameron Parish, Louisiana. Faulting is indicated by heavy broken lines. Contour interval is 200 feet.

the very encouraging pattern of leads shown in Figure 4 (S. P. 9). Dr. H. B. Peacock, in charge of the work, rightly interpreted the strong time leads to the northeast as being strongly indicative of a salt dome, placing its probable location as Section 27, T14s, R13w. They followed up with a fan from S. P. 78, intended as a check on the first one. However, the detectors for this fan were so close to the north side of the dome that the mirage distance fell somewhere about the south side of the dome. Consequently, their supervisory staff, faced with an apparent contradiction, ruled out the evidence from S. P. 9, instead of taking still another fan shot, and concluded that no salt dome existed in the area. Dr. Peacock, in his report on the later shooting, was persuaded to agree with the others that "previously secured leads (from S. P. 9) are entirely due to a fairly high speed layer not normally encountered in this area."

It must be noted, however, that at that time it was not yet the custom to plot the time leads as shown in Figure 4. It was sometime after this that the Geophysical Research Corporation adopted the now conventional graphical method of plotting the fan time leads on radii extending out from the shot point toward the respective detectors. After plotting the data in that manner, the area was again considered strongly favorable, especially by Dr. E. E. Rosaire, who was then on their staff.

b. In 1929 it was prudently decided to obtain more refraction data, as there could be no conclusive interpretation of the data from the first two fans. Figure 4 shows the results of the additional work. S. H. Stuart was the party chief. Profiles were shot in several directions, averaging eight miles in length, to obtain normal velocity data. The complete fan data seemed to point to a dome in Section 21, T14s, R13w. Therefore, north-south profiles were shot across this localized uplift area, in the hope of obtaining salt interval velocity.

c. Following this, 17 work days in July, 1929, were spent doing correlation reflection shooting over the area of the refraction anomaly. Figure 5 gives the results. Comparison of their map with the salt contour map from drilled wells (Figure 7) is proof that this was a good job in view of the limitations of early equipment and the conditions under which the work was done.

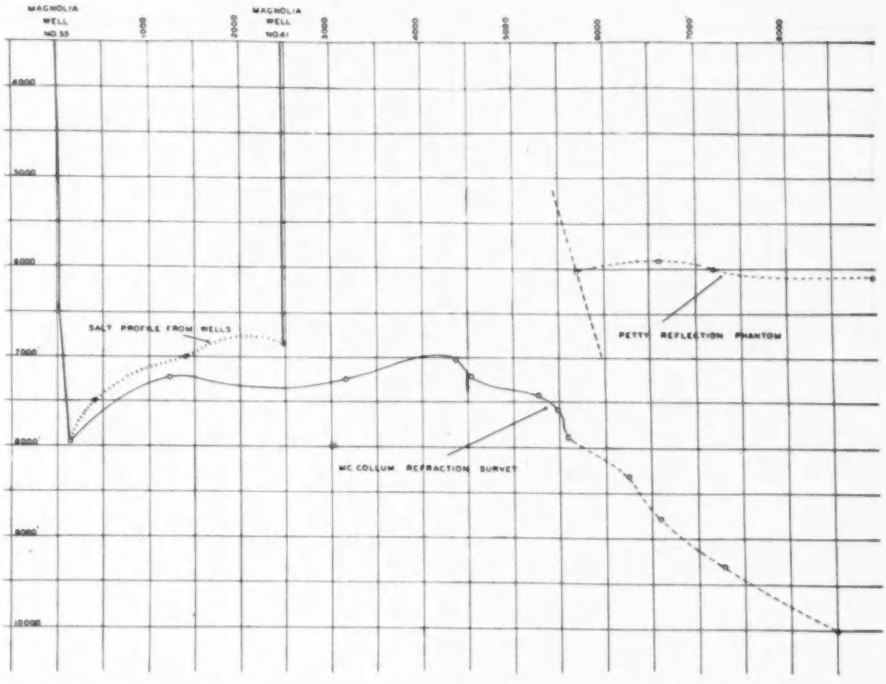


Figure 10. Line C, McCollum refraction seismograph survey (Figure 8) showing: 1. Salt profile from McCollum survey; 2. Salt profile from drilled wells; 3. Petty reflection phantom horizon. Cameron Meadows, Cameron Parish, Louisiana.

It is interesting to note that generally Geophysical Research Corporation used blast phones to determine fan distances, although surveyed distances were used on profiles.

In January, 1932, the merger of Vacuum Oil Company and Magnolia Petroleum Company was consummated. Hence, after that date the data from the foregoing geophysical explorations were pooled in the Magnolia Petroleum Company files.

4. Due to the fact that there was further rapid improvement in instruments, in June, 1933, Magnolia Petroleum Company employed Geophysical Service, Inc., to make a dip reflection survey of the area as a guide to further drilling. There were then three producing wells. Their results are given in Figue 6.

In September, 1933, Humble Oil & Refining Company acquired half interest in the Cameron Meadows lease. Subsequently development of production and geophysical exploration has, therefore, been a joint program of Magnolia Petroleum Company and Humble Oil & Refining Company.

Figure 7 shows the shape and size of the salt mass as determined by drilling. All wells shown, both dry and producing, found salt.

5. It will be noted that the refraction fan data indicated abnormal conditions extending from Section 21 into Section 27, T14s, R13w. Therefore McCollum Exploration Company was employed to make a special type refraction analysis of this area. They used their patented (U. S. Pat. 1,923,107) method of lowering a detector in a well to a point at or near the salt contact and recording impulses received from shot points spaced along radial lines extending across and beyond the dome. For this purpose

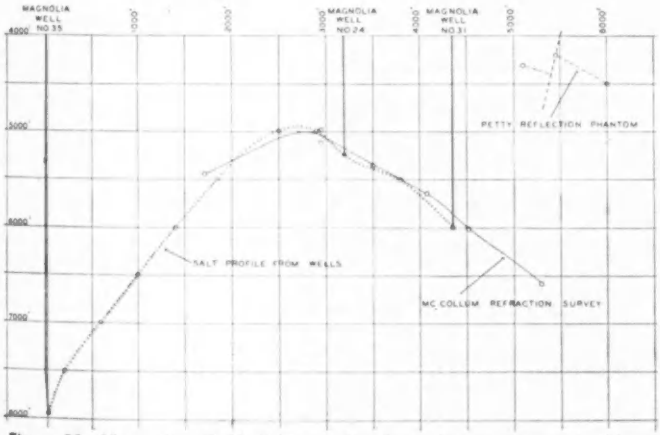


Figure 11. Above, line E, McCollum refraction seismograph survey (Figure 8) showing: 1. Salt profile from McCollum survey; 2. Salt profile from drilled wells; 3. Petty reflecetion phantom horizon.

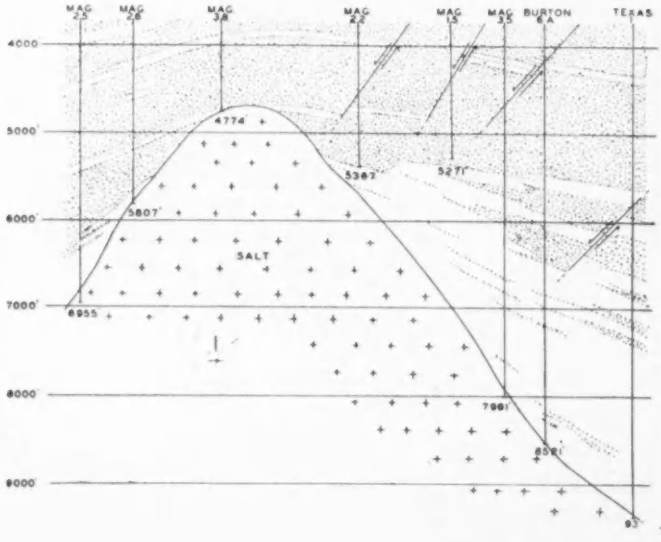


Figure 12. Right, SW-NE cross section of the Cameron Meadows Dome (After Linn Morrow, Magnolia Geological Department). Sands shown dotted, shales clear.

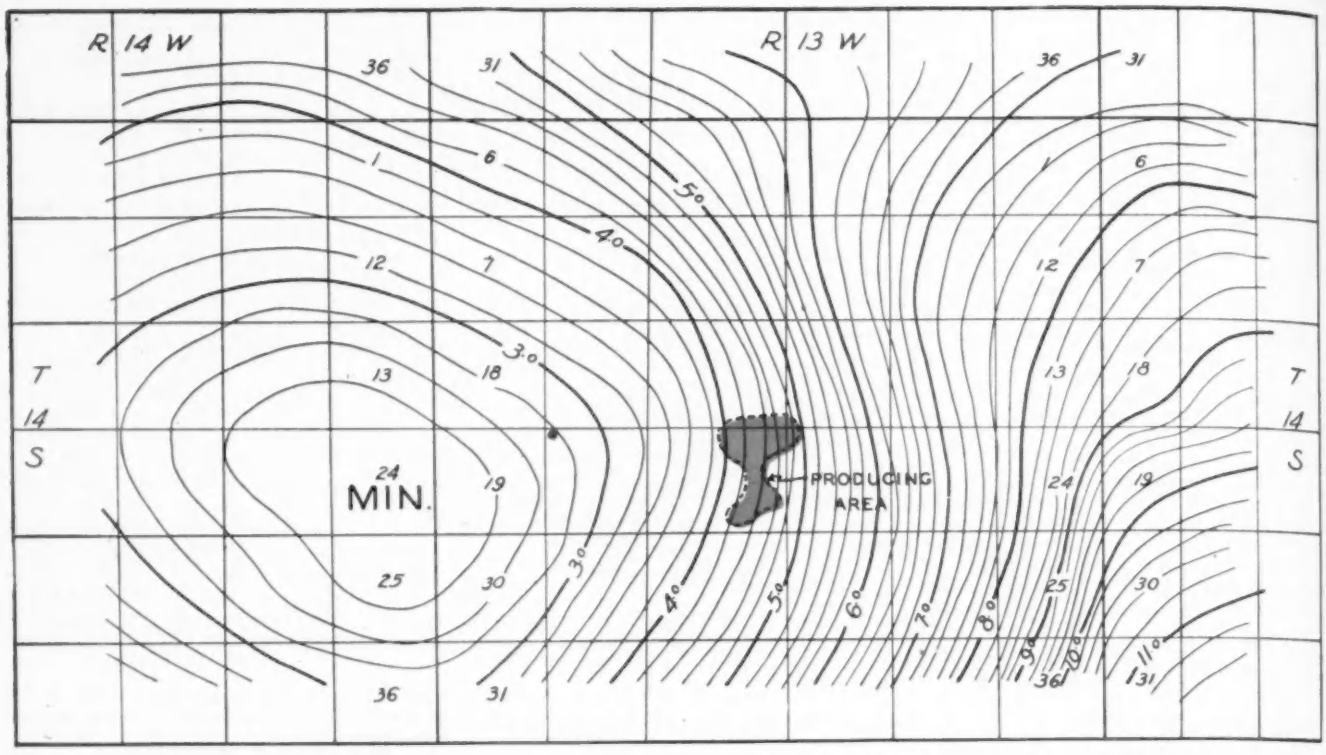


Figure 13. Robert H. Ray, Inc., 1943 gravity meter survey for the Yegua Corporation. Total gravity contoured at 0.2 mg intervals. Cameron Meadows, Cameron Parish, Louisiana.

Well 35 was used. This well is on the northeast corner of the dome near the northeast corner of Section 21. Figure 8 shows their calculated salt contours, strikingly similar to the salt map from well control, Figure 7.

6. Since the McCollum survey confirmed the suspicion of a SE extension of the salt mass, Petty Geophysical Enginering Company was employed, from July to September, 1942, to make a detailed continuous profile reflection survey of the area. Their results are shown in Figure 9.

On the profile sections by McCollum shown in Figure 10 and 11 are superimposed the deepest Petty reflection data, together with the drilling data. Presumably the known salt depths were used by the McCollum Company for velocity adjustments that would tie their profiles to these known dimensions of the dome. The discrepancies may be due partly to sideswipe of the refraction rays. Well 38 on line G has been drilled to the salt since the McCollum survey was made, and it fits the McCollum prediction closely. Well 41 on line C also has been drilled to the salt since their work.

The Petty data shown is a phantom horizon drawn through the very deepest usable data. Over the dome no data at this phantom depth was obtained nearer the apex than shown. The reason for this gap of 750 to 2000 feet between the deepest reflection data and the salt profile, as known from drilled wells, may be the thick section of Miocene shales shown in Figure 12. This section is made from electric logs along McCollum's line G and extended northeast to include Burton well 6A and The Texas Company 1. If this is the explanation, it means that these several thousand feet of shales have no seismic interfaces.

7. In March, 1943, Robert H. Ray, Inc., made a regional gravity meter survey of an area including the Cameron Meadows dome for Yegua Corporation, which furnished the data pertinent to the restricted area of interest in this paper. It is presented in Figures 13 and 14, Figure 13 being the map of the observed gravity, and Figure 14 a map of the residual anomaly in the vicinity of the producing area.

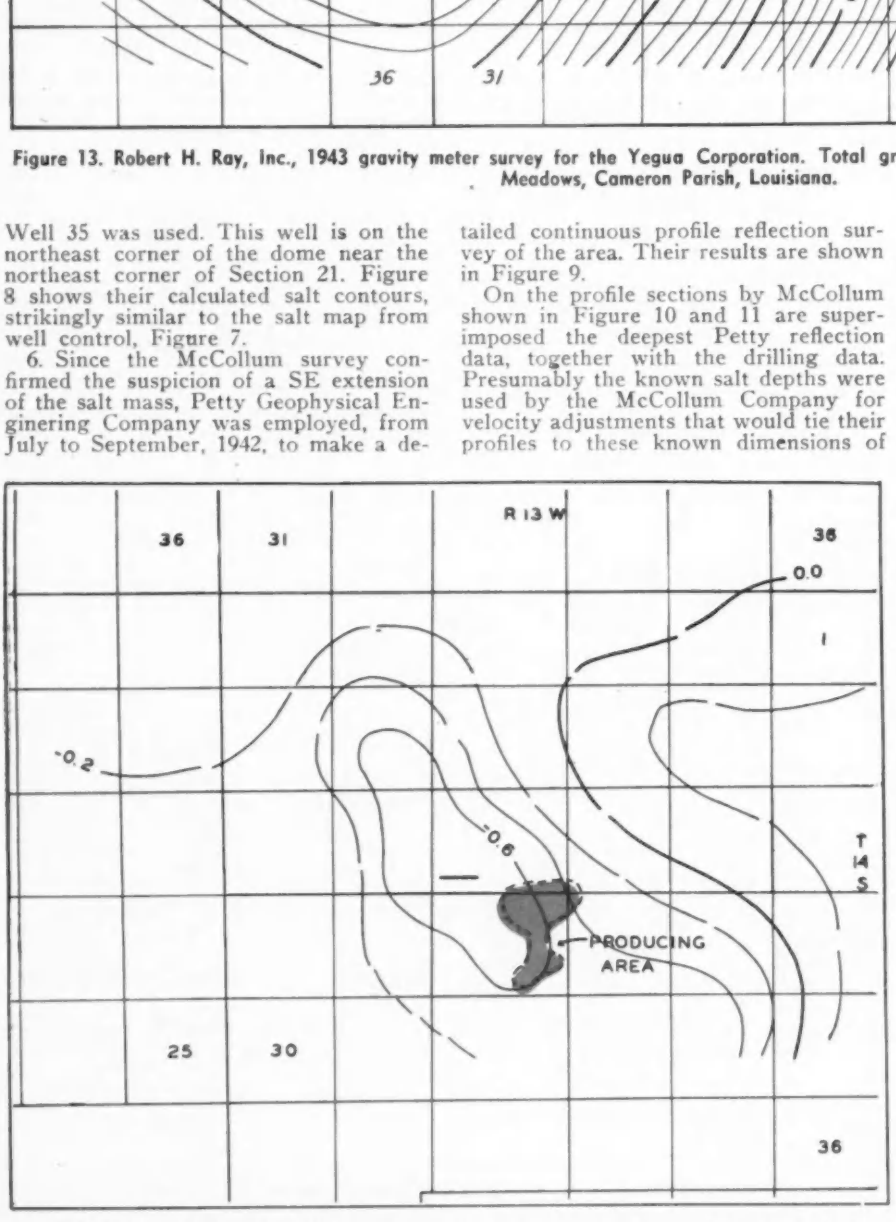
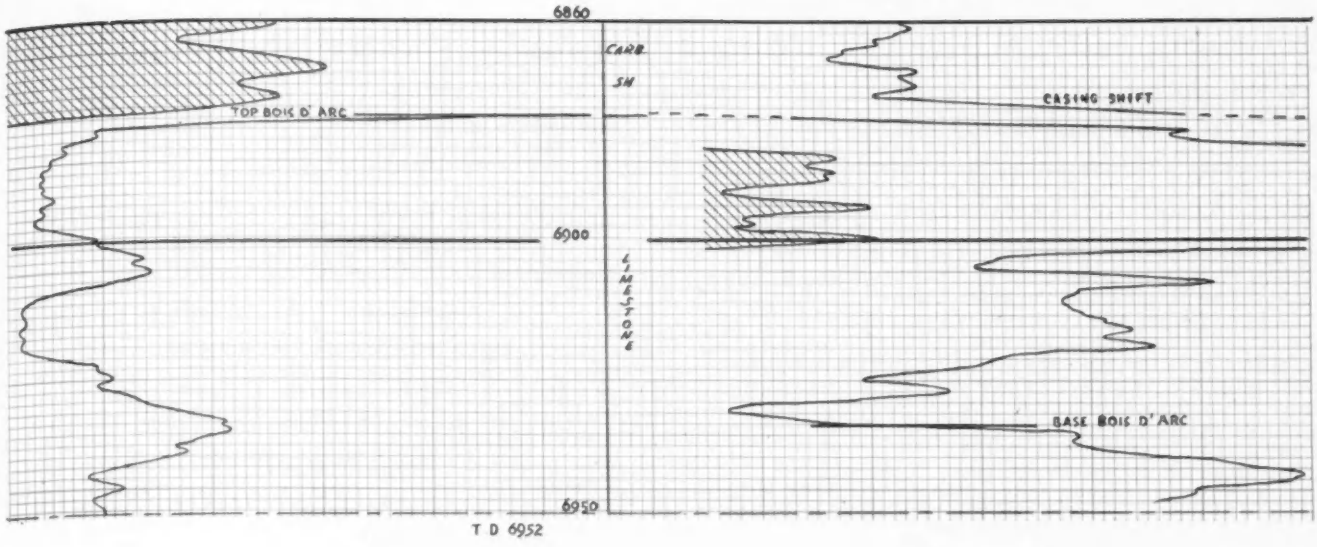


Figure 14. Robert H. Ray, Inc., 1943 gravity meter survey for the Yegua Corporation. Residual gravity contoured at 0.2 mg intervals. Cameron Meadows, Cameron Parish, Louisiana.

Acknowledgments

For permission to publish these data the writer expresses appreciation to Magnolia Petroleum Company, Humble Oil & Refining Company, and Yegua Corporation; to Henry C. Cortes for his able help and suggestions in the preparation of the paper; and to Mrs. Jane Artusy of the Magnolia Geophysical division for her painstaking labor in preparation of the maps.

Figure 1



Better Interpretation of *Neutron Curves*

By J. C. BARCKLOW
Lane-Wells Company

IN INTERPRETING the neutron curve in radiactivity well logging the following questions have often been asked:

Why is it that the neutron curves sometimes show high intensities opposite geological sections showing oil staining?

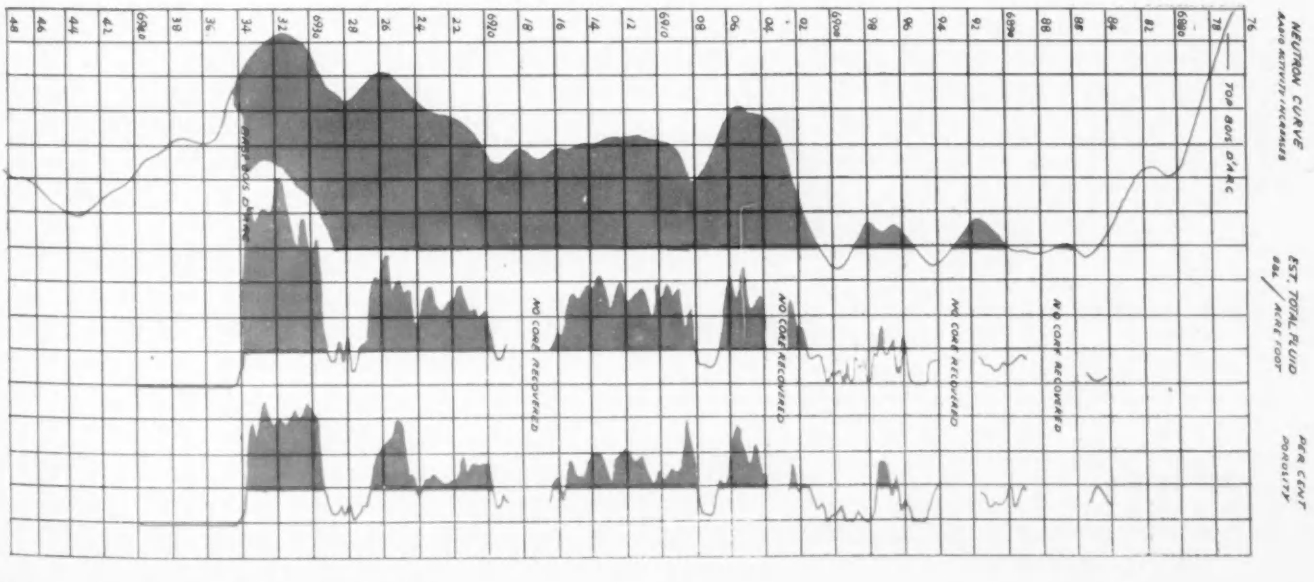
Is the neutron curve a measure of relative porosity?

Could the neutron curve be a measure of the relative total fluid in the section surveyed?

Until March, 1945, no exhaustive physical tests to determine what a neutron curve was indicating had been successfully completed. It is true that production tests over small sections had been made, usually with gratifying results. Between March 3 and March 10, 1945, Sohio Petroleum Company cored, with a special diamond head core barrel, 57 feet of the Bois d'Arc and Harragan-Henryhouse sections of the Hunton lime in a well in the West Edmond pool of Central Oklahoma. The recovery was 49 feet, 11 inches of core. It was thought that a comparison of the analysis of these cores with a neutron curve run through the same geological section might shed some light on the above questions. The 57-foot section that was cored was taken in six cores. They are described by Joe Peerson, geologist with Sohio, in Table 1.

Since the measurements attached to the cores do not exactly coincide with what were believed to be the top and bottom of the Bois d'Arc section of the Hunton from the radioactivity log, it is deemed advisable to place them in coincidence for comparative purposes. The top of the Bois d'Arc assigned to the cores was picked from an electrical log run before coring started when the well was at a total depth of 6878 feet. The bottom of the Bois d'Arc was picked

Figure 2



from drill pipe measure used while coring and which was correlated with the electrical log measure starting at 6878 feet and carried to 6936 feet where the coring stopped. The hole was then drilled to a depth of 6952 feet before the radioactivity log was run. The top of the Bois d'Arc on the radioactivity log was picked at 6877 feet from the gamma ray curve. The base of the Bois d'Arc is considered to be at 6934 feet and was picked from the neutron curve (Figure 1). From the electrical log the top of the Bois d'Arc is at 6874 feet and from the drill pipe measure, the base of the Bois d'Arc is at 6929.5 feet. It is, therefore, necessary to lower all figures in the core analyses 4 feet, 6 inches in order to bring the base of the Bois d'Arc from the cores into coincidence with the base of the Bois d'Arc as picked from the neutron curve. It was impossible to reconcile the top of the Bois d'Arc from the gamma ray curve with the top from cores because the well was already several feet in the Bois d'Arc when the coring started.

For purposes of the core analyses where 100 percent recovery of the core was not obtained, the number of feet of core actually recovered was assigned to a similar number of feet at the top part of the total section cut in each core.

Such a large number of core analyses was made (three to four to each foot of core) that it was necessary to expand the vertical scale of the neutron curve from one inch equals 20 feet to 1 inch equals two feet. The horizontal scale was not expanded. The points taken from the analyses and used to plot the porosity curve, and the total fluid curve, are also plotted on the scale of one inch equals two feet. This was necessary in order to get a figure that would properly reproduce when photographed down to make a cut of such size that it could be used with this article. The enlarged neutron curve, together with other curves selected from the core analyses, is shown in Figure 2.

Neutron Curve Intensity

To answer the question, "Why do portions of neutron curves having relatively high intensities through limestone sections sometimes occur opposite sections showing oil staining?" attention is called to Figure 2. The descriptions of the cores from approximately 6883 to 6901 feet on the figure indicate considerable oil staining throughout that section. The intensity of the neutron curve through this section is also relatively high. An examination of the curve showing total fluid indictaes that in no part of the section 6883 feet to 6901 feet does the total fluid exceed 375 barrels. The average is approximately 100 barrels. The area showing over 200 barrels is limited to less than two feet. The only conclusion that can be drawn is that there evidently is not enough total fluid in this section to materially affect the neutron curve intensity. Data concerning the reaction to acid, of this section, will no doubt show how much of the fluid can be recovered by present production methods.

Concerning the relation of rock porosity to neutron curve intensity, reference is again made to Figure 2. In general, the porosity curve follows the neutron curve quite closely. One notable exception occurs at 6883.75 feet to 6885 feet, another at 6889.5 feet and again at 6894 feet. At these points the total fluid is also low. Since the figures used to plot the points for both the total fluid and porosity curves are taken from the same point in the cores, there seems to be no doubt that a rock can be porous and still contain little if any fluid. This is the exception rather than the rule, however, and is borne out occasionally in other areas than West Edmond where core analyses have been available. Figure 3 graphically pictures the relation of porosity to neutron curve intensity.

Could the neutron be a measure of the relative fluid in the section sur-

Table 1

Core No.	Depth	Footage Recovered	Percent Recovered
1	6879-6884′	1′ 9″	35

Description

Buff to gray, tight, coarsely crystalline lime. Slightly dolomitic. Thin streaks of glauconite. Porosity secondary in dolomitization and primary in lime crystallization. Odor, stain, and gas bubbles.

Core No.	Depth	Footage Recovered	Percent Recovered
2	6884-6889′	3′ 1″	61.6

Description

White to gray, tight, coarsely crystalline lime and medium succrose dolomite. Dolomite content increasing. Evidence of some solution porosity. Thin streaks of glauconite. Saturation and non-saturation appears to have vertical segregation. Porosity is probably (1) primary in lime crystallization; (2) secondary in dolomitization and solution type.

Core No.	Depth	Footage Recovered	Percent Recovered
3	6889-6899′	9′ 0″	90

Description

Two feet coarsely crystalline lime and medium to coarse succrose dolomite. Shows definite "honeycomb structure." Good saturation, good odor. Three feet dolomite lime (secondary dolomitic deposition) showing good solution-type porosity, good stain and odor. Three feet tight microcrystalline to dense gray dolomite, odor. Slight to no saturation. Evidence of possible vertical fracturing in these three feet. One foot dolomite lime, good secondary dolomitic deposition. Good saturation, odor; fair to good porosity.

Core No.	Depth	Footage Recovered	Percent Recovered
4	6899-6914′	12′ 9″	85

Description

Two feet coarse, succrose dolomite. Good saturation and odor; porosity due to dolomitization and some solution type. Two feet, six inches tight, brown to gray, microcrystalline to dense dolomite, odor but poor staining. Eight feet, three inches tight oolitic dolomite. Oolites are small and set in a matrix of fine succrose dolomite. Good saturation, odor. Porosity is that induced by dolomitization and is probably primary, possible small amount of solution type porosity.

Core No.	Depth	Footage Recovered	Percent Recovered
5	6914-6924′	10′ 0″	100

Description

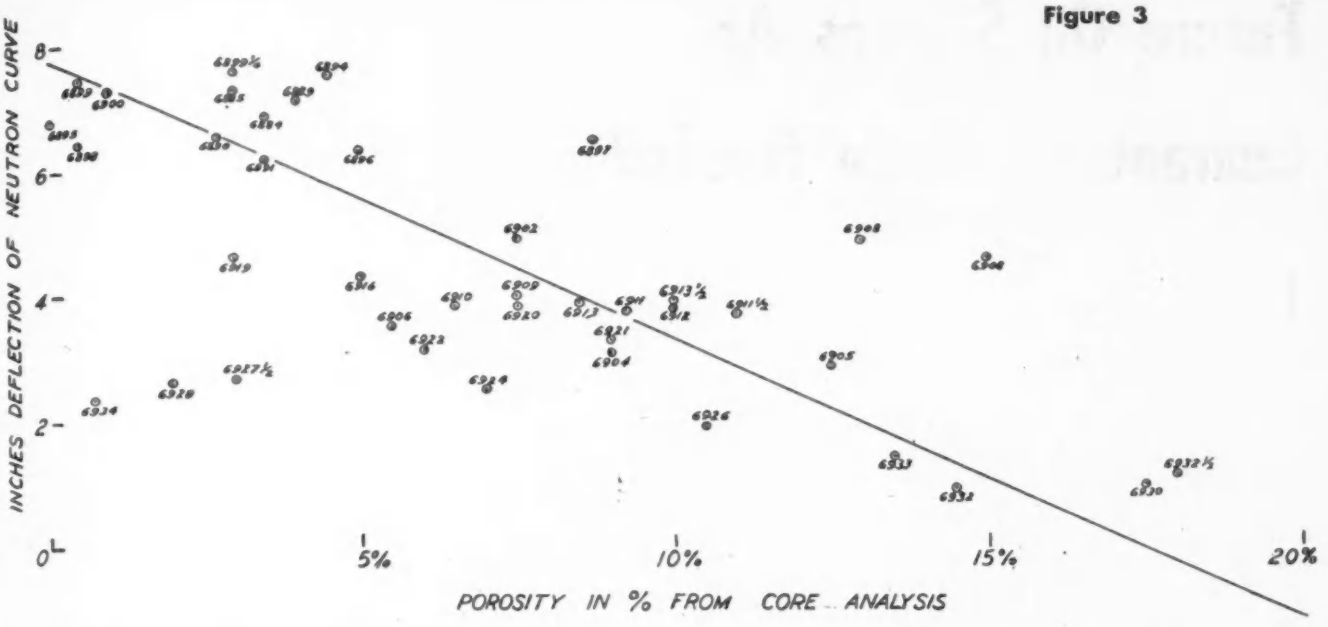
Six feet tight, fine succrose dolomite showing inclusions of lime crystallization. Good stain, odor, gas bubbles. Two feet dark brown, fine, tight succrose dolomite. Good stain, odor, gas bubbles. Two feet tight, brown to gray, microcrystalline dolomite, gas bubbles, slight stain, odor.

Core No.	Depth	Footage Recovered	Percent Recovered
6	6924-6936′	11′ 4″	95

Description

One foot light to medium brown, medium succrose dolomite. Fair stain, odor, gas bubbles. Four feet dark brown succrose dolomite, gas bubbles, odor. (Base Bois D'Arc) six feet, four inches tight, gray, finely granular dolomitic lime (Harrigan).

Figure 3



veyed? On the total fluid curve, Figure 2, it will be noted that there are many minor variations in total fluid over very small areas. This is due to the fact that there are some three to four analyses for each foot of core recovered. If an averaging curve were drawn through these points on the total fluid curve, it would follow the neutron intensity quite closely with a few notable exceptions. As stated earlier, not all of the core was recovered in each case. The analyses were assigned to the top part of the core in every case. Therefore, by either raising or lowering portions of the total fluid curve between points marked "No core recovered," it is quite easy to get an almost perfect fit where the curves seem to be in disagreement.

Concerning the area from 6906.5 feet to 6909 feet on the neutron curve, it should be noted that the intensity of this section on the neutron curve is quite low; opposite this same area the total fluid curve shows the number of barrels to be low and the porosity curve indicates very little porosity. This can be explained when it is considered that there is an averaging effect throughout the distance between the neutron source and the ionization chamber of approximately 20 inches. It should also be remembered that the surveying is taking place at the rate of ten feet per minute. The ionization chamber, just before moving into this zone, is in an area containing a large amount of total fluid and relatively high porosity. It is in the section a very short time and then moves out of it into another area of relatively high porosity and high total fluid. The instrument, therefore, does not have time to react and give as high intensity to the neutron curve as was obtained in the upper part of the log where the total fluid and porosity is relatively low and the section much thicker. This same thing happens at a point 6918.5 feet to 6919.5 feet on the curve and again at 6926.5 feet to 6929 feet.

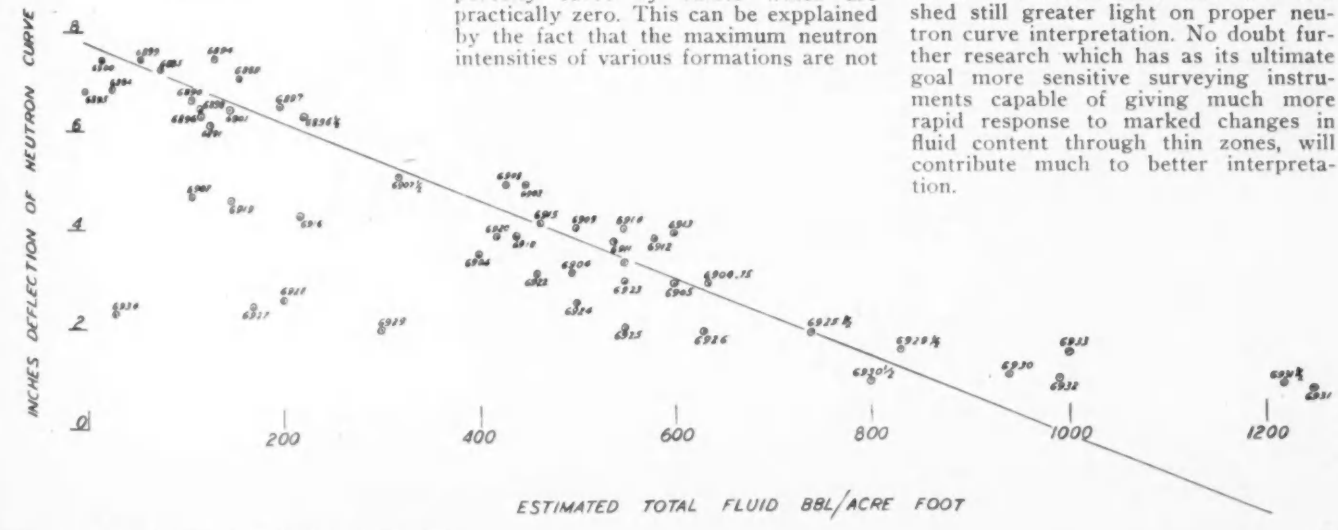
Other Irregularities

There are also other various minor irregularities on the neutron curve, opposite very thin zones, which present the same sort of picture. These variations are shown graphically on Figure 4. Below the indicated base of the Bois d'Arc on the neutron curve at 6934 feet, the intensity of the curve is relatively low to 6939 feet. This zone is also represented on the total fluid curve and porosity curve by values which are practically zero. This can be expplained by the fact that the maximum neutron intensities of various formations are not always the same and it is necessary to have a detailed knowledge of the lithology of the section being surveyed in order to make intelligent interpretations of neutron curves. Bois d'Arc lithology differs from Harragan-Henryhouse considerably.

In conclusion it might be said: (1) That there is not enough total fluid in some rock sections opposite high neutron intensity to materially affect or cause much variation in the intensity of the curve, though oil staining is present in the section. (2) That points of relatively low intensity on the neutron curve are quite often opposite sections of relatively high porosity but do not always coincide. (3) That when the operating limitations of the present neutron instruments are thoroughly understood as well as the lithology of the section being compared to the neutron curve, the neutron curve is an accurate indication of total fluid at all times.

Whether the results of this study can be confirmed in other areas remains to be seen. A similar study through a sandstone section bearing oil saturation of varying amounts separated by impermeable and non-porous zones would no doubt be very interesting. It is hoped that this work will be an incentive toward more of the same kind that will shed still greater light on proper neutron curve interpretation. No doubt further research which has as its ultimate goal more sensitive surveying instruments capable of giving much more rapid response to marked changes in fluid content through thin zones, will contribute much to better interpretation.

Figure 4



Future Oil Sources Are Guaranteed When Needed

THE United States "has a potential source for an abundant supply of gasoline for its future industrial developments," declares F. B. Plummer, geologist, bureau of economic geology, University of Texas and chairman of the committee on production geology of the petroleum division of the American Institute of Mining and Metallurgical Engineers. In an article, "New Sources Being Studied for Our Postwar Petroleum Products," which appears in the February Annual Review Number of *Mining and Metallurgy*, the monthly magazine of the AIME, Plummer indicates four lines of approach for expanding future oil supplies.

They are, he says:

". Securing new national and large foreign reserves;

"2. Developing a method of cheap extraction of oil from oil shales;

"3. Manufacturing cheaply the combustible hydrocarbons from coal, lignite, and perhaps peat and agricultural products by the hydrogenation processes or new processes yet to be discovered;

"4. Developing methods of synthesizing cheaply the liquid hydrocarbons from natural gas."

New Oil Developments

As for new oil developments, Plummer mentions that the West Edmond pool, North of Oklahoma City and the expansion of new discoveries in southern Mississippi during the last year signify that large supplies are still to be found in the United States.

"The difficulty of locating pools like the East Texas pool and West Edmond pool in Oklahoma by ordinary geological or geophysical work," he says, "suggests that more intensive subsurface engineering and geological work is necessary—a search for every major buried ridge, a detailed study of the subsurface stratigraphy, development of cheaper coring methods for locating petroliferous strata and courage to test the favorable pinched-out sands at the most promising spots.

"Such a program is bound to locate new reserves. In this way large pools maye be discovered in foreign countries where up to now, from Mexico to Iran, geological and geophysical work has concentrated on the location of anticlines and domes and few attempts have been made to locate an East Texas type of pool. Undoubtedly, many stratigraphic traps adjacent to the larger oceanic islands, the Philippines, the Netherlands Indies, and the West Indies are filled with oil. Some of these chains of islands are simply ridges partly buried beneath overlapping sediments of the present seas. The subsurface strata contain rich source beds and probably oil pools exist along their borders. Such pools will be difficult to find and difficult and costly to develop, but may add large reserves of oil to our resources."

Indicating how much in earnest is the government of the United States in preparing for future oil sources and reserves, Plummer tells of the $30,000,000 appropriation to be expended by the Bureau of Mines over the next five years in developing fuel from oil shale, coal, lignite, and agricultural and forestry products.

"Oil shale," he says, "is known to occur in quantity in at least eighteen states: Arizona, Arkansas, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kentucky, Maryland, Missouri, Montana, Nevada, Oklahoma, Pennsylvania, Wyoming, Texas and Utah."

Oil Shale Reserves

He further indicates that estimates have been made by a competent geologist to the effect that more than 90 billion barrels of recoverable oil may be had from these shales, as is indicated in the following table:

Estimates of Oil Recoverable from Oil Shale
(In thousands of barrels)

State	Total Oil	Recoverable Oil
Colorado	79,626,000	47,625,600
Nevada	6,000	3,600
Utah	48,800,000	25,680,000
Wyoming	3,044,000	1,826,400
Indiana	7,680,000	6,912,000
Kentucky	10,978,500	9,880,700
Pennsylvania	13,800	8,300
West Virginia	13,800	8,300
Total	150,162,100	91,944,900

"Since the total known oil reserves of the United States," says Plummer, "are estimated to be only 20 billion barrels, this 92 billion is a sizeable addition. Such figures at best are only rough estimates but they do indicate a possible sizeable reserve of liquid and gaseous hydrocarbons in shale."

Europe's Experience With Shale

Plummer cites the fact that oil is being obtained from shale in Scotland, Estonia, Germany, Russia, France, Australia, Sweden, Manchuria, and Japan. "Scotland," he says, "now has six oil-shale plants handling 5000 tons of shale daily, yielding 18 percent to 45 percent crude oil. The quality of the refined products obtained from shale oil is lower and the costs of production are higher than are the costs of light fractions produced from petroleum. In Sweden a new method has been devised for the direct extraction of oil from the shale beds by electrical heating. The process requires large amounts of electricity, but it increased the yield of oil from shale in Sweden to over 500,000 barrels in 1943."

He further points out that the Germans have built their industrial nation and carried on the European war on oil manufactured from brown coal. "Oil," he says, "is being made from coal in Germany, France, and England and recently the Bureau of Mines has been carrying on extensive research in the hydrogenation and liquefaction of coal and lignite in this country.

"The experiments," he continues, "covered a wide range of rank of coals, including peat, brown coal, lignite, subbituminous and bituminous coal, and lead to the conclusion that hydrogenation under optimum conditions results in high liquefaction yield.

"The United States has enormous reserves of lignite in Texas stretching from Texarkana on the northeast to Eagle Pass on the Mexican border, large deposits of subbituminous coal in northern Texas and southern Oklahoma, large reserves of coal in Illinois, Indiana, Pennsylvania, and the Virginias; immense lignite deposits in the Dakotas, and coal and lignite in most of the Rocky Mountain States."

Supplemental Gasoline Supply

Plummer states that when the process of hydrogenation of coal is perfected by American technical skill it is sure to make available a gasoline supply that will not only supplement our future oil and gas discoveries, but eventually meet all our needs.

As to natural gas, Plummer points out that millions of cubic feet of this valuable material is lost from our oil fields. "The rest of the huge production, amouning to about 2½ trillion cubic feet per year," he says, "is used for heating and generating steam and electrical power. Methods have recently been perfected for converting natural gas into gasoline."

Plummer tells of a plant in Olean, New York which is now handling about 64 million cubic feet of gas per day and turning out some 6000 barrels of 83-octane gasoline or about one barrel per 10,000 cubic feet of gas. "The United States," he says, "has about 85 trillion cubic feet of proved gas reserves and probably another 85 trillion of potential reserves. If all the proved reserves of gas were converted into gasoline by this process, the yield would be more than 8 billion gallons of high-octane gasoline."

Output Is from Resources Economically Developed

Present oil production is from resources developed when costs of finding oil were relatively lower, it was declared by Eugene Holman, president of Standard Oil Company (New Jersey).

Holman said that despite the defeat of Germany, Standard's resources and facilities are still being called on to full capacity to meet the needs of the armed forces and of war production.

Palmer to Be Decorated

T. W. Palmer, head of the Latin American legal staff of Standard Oil Company of New Jersey, shortly will receive the Venezuelan government's highest decoration, the Order of the Liberator, with the rank of commander, a grade never before accorded a private citizen.

The award was authorized by President Isaias Medina for Palmer's part in bettering relations between Venezuela and the United States.

In 1936 Palmer was decorated with the Brazilian Order of the Southern Cross.

July Completions Decline In Rate of Increase

THE rate of increase in weekly completions over the United States during July decreased .9 of 1 percent as compared with June, though the total number of wells reported as completions in July was greater than in June, by 52.

As compared with activity one year ago, the total for July, 2238 wells, represents a gain of 11.5 percent. If maintained, this rate of increase should give the 27,000 wells asked this year by PAW. It is doubtful, however, whether the rate of increase will hold during the next five months. The recent quieter trend in a good many parts of the country indicating that fewer wells are being drilled, might be explained by several factors, chief of which is that a good many companies have used up their 1945 appropriation for drilling and will not start other wells. This applies perhaps to straight development in proven areas more than to wildcatting.

Major Problems

As has been pointed out recently in THE OIL WEEKLY, the major problems which confront the industry as it looks peaceward, are the disposition of wartime facilities, national oil policy, the price situation, subsidies and Federal taxation.

All of these are likely to have a direct effect on drilling in the first year following V-J Day.

Spurred by the wartime demand for oil and its various products, nearly every area in the country is producing all the oil permitted, and beyond the considered maximum efficiency rate in a good many districts. This activity is reflected in great increases in weekly average percentages. For instance, the accompanying table shows 29 different states as showing completions. Of this number, only ten show a loss in weekly average. All the others show gains ranging from small to very high percentages, 907.7 percent increase in Florida, for instance. The very high percentage gains are in those states of the southeast where production has not yet been established in commercial quantities, but where intensive search for new fields is now going on.

Notable Increases

In the old, established areas, notable increases are recorded in the weekly percentage. In Texas, one area only, the East Texas district, fails to show a gain. The highest increase was reported from the Panhandle, with a gain of 143.3 percent over June, and the total state increase was 26.2 percent. California held close to the national average of 11 percent increase. Oklahoma and Louisiana showed slightly better than 37 percent up. Mississippi gained 113.6 percent, due to its big exploration program.

Footage drilled during July reached 7,405,200 feet, a gain of 33,634 feet over June.

Weekly Completions in July Total 54 More Than Previous Month

(Figures compiled from weekly reports of editorial men, with following exceptions: Illinois from Illinois Geological Survey; Indiana from Indiana Division of Geology; Missouri from Missouri Geological Survey; Allegany, New York, Bradford and Kane-Clarendon, Pennsylvania, from the Producer's Monthly; Tennessee from Tennessee Division of Geology.)

State or District	MONTHLY COMPLETIONS: July, 1945 — Details for July, 1945 — New Wells — *Oil	Gas	Dry	Others[6]	Old Wells Deepened	Total Completions — July, 1945[1]	June, 1945[3]	July, 1944[2]	Total Footage July, 1945	CUMULATIVE COMPLETIONS: First Seven Months — Details, January-July, 1945 — New Wells — *Oil	Gas	Dry	Others[6]	Old Wells Deepened	Total Completions — Jan.-July, 1945[4]	Jan.-July, 1944[5]	Percent Change, Weekly Aver.	Total Footage 7 Months 1945	RIGS IN OPERATION — Details for July 1945 — Drilling	Rigs Up	Shut Down	Total: Drilling and R. U. — July 31, 1945	June 30, 1945	July 31, 1944
Alabama	2		3			5	6	3	19,824	8	1	12			21	17	+ 27.7	70,929	6		2	6	7	6
Arizona								3								6								
Arkansas	14	1	6			21	17	37	79,668	62	2	41		1	106	135	— 18.9	426,128	28	5	4	33	31	46
California	158	3	25			186	190	157	771,219	1,042	24	178		5	1,249	1,154	+ 11.8	5,082,859	276	51	38	327	335	368
Colorado	5	1				6	1	2	37,774	15	1	2			18	14	+ 32.7	104,303	31	14	4	45	29	18
Florida	1					1	1		11,549	1		9			10	1	+940.6	70,500	4			4	4	4
Georgia			2			2	1	1	6,229			6			6	2	+207.7	19,502					1	2
Illinois	106		92	5	10	213	150	217	429,501	560		379	11	88	1,038	1,050	+ 2.2	2,280,242	174	37	28	211	225	244
Indiana	13	2	15	1	1	32	35	34	52,799	63	12	109	1	4	189	168	+ 16.3	298,505	32	19	10	51	51	41
Iowa												1			1	2	— 49.2	1,250						1
Kansas	80	11	61	2	6	160	141	165	486,850	429	68	388	5	44	934	1,030	— 6.3	2,946,720	260	19	8	279	277	273
Kentucky	26	7	11			44	48	68	86,969	122	41	108	1	1	273	415	+ 32.0	526,407	45	26	5	71	57	91
Louisiana	51	8	27			86	89	69	607,388	341	37	189		2	569	428	+ 37.4	4,417,696	173	8	10	181	173	150
North	21	8	16			45	34	28	211,038	90	32	82			204	148	+ 42.4	995,365	56	4	8	60	54	49
South	30		11			41	55	41	396,350	251	5	107		2	365	280	+ 34.7	3,422,331	117	4	2	121	119	101
Michigan	16	5	21			42	68	65	106,377	174	23	219			416	373	+ 15.3	1,077,174	97	9	21	106	134	105
Mississippi	15		14			29	30	35	159,556	114	3	100			217	105	+113.6	1,403,853	60	5	7	65	68	39
Missouri		5	3		1	9	5	5	3,030	2	6	20		2	30	18	+ 72.1	37,591	5		4	5	4	7
Montana	23	1	5			29	21	29	68,891	90	10	23			123	182	— 30.2	316,809	43	10	8	53	59	52
Nebraska			1			1			4,494			3			3	7	— 55.8	14,512	1	1		2	2	2
New Mexico	20		9			29	31	25	101,555	172	9	64		1	246	235	+ 8.2	864,960	97	8	12	105	105	94
New York	72			40		112	110	113	150,528	401		2	226		629	734	— 11.4	842,659	104	14	26	118	113	116
North Dakota																								3
Ohio	27	27	35			89	98	78	206,422	130	188	207			525	496	+ 9.4	1,318,623	178	22	44	200	180	195
Oklahoma	119	3	54	8	8	192	211	163	729,565	824	51	427	27	28	1,357	1,017	+ 37.9	5,681,904	438	35	18	473	466	509
Pennsylvania	126	31	4	104	2	267	271	266	479,570	836	122	27	717	12	1,714	1,677	+ 5.6	2,934,286	248	41	60	289	315	307
South Dakota																			3			3	3	2
Tennessee								2				2			2	9	— 77.0	5,890		1		1		4
Texas	334	60	186		8	588	587	469	2,536,094	2,342	390	1,363	20	57	4,172	3,415	+ 26.2	18,498,525	1,119	61	99	1,180	1,206	1,083
E. Tex. Bor.	2	9	5			16	2	2	96,814	5	32	13			50	13	+ 29.8	315,774	40	1	2	41	34	7
E. Tex. Field																3								
Rest of E. Tex.	6	3	10			19	22	27	112,584	62	7	57		2	128	174	— 24.0	811,739	39	5	8	44	47	57
North	75	4	66		4	149	157	110	367,200	500	10	435	18	13	976	795	+ 26.9	2,393,284	151	8	8	159	146	160
West Central	16	2	16		1	35	41	26	92,506	101	32	129		3	265	225	+ 21.7	723,145	76	5	34	81	85	62
West	99	1	24		1	125	142	113	573,656	786	9	240		24	1,059	898	+ 21.9	4,991,010	388	16	35	404	440	419
Panhandle	19	27	3		2	51	42	30	153,041	113	194	25		7	339	144	+143.3	1,057,543	130	5	7	135	147	85
Upper Coast	26	2	17			45	54	42	328,769	227	26	141		5	399	316	+ 30.5	2,905,692	93	9	1	102	96	96
Lower Coast	69	10	18			97	80	82	617,094	384	60	162	1	2	609	536	+ 17.4	3,865,059	135	7	1	142	144	137
Southwest	21	2	19			42	38	30	156,378	145	20	125		1	291	254	+ 18.4	1,162,234	50	5	1	55	47	45
South Central	1		8			9	9	7	38,052	19		36	1		56	57	+ 1.5	273,045	17		2	17	20	15
Utah																			4	1		5	2	3
West Virginia	10	46	12		4	72	71	66	174,114	42	327	60		28	457	522	— 9.5	1,157,674	93	15	23	108	80	96
Wyoming	17	1	5			23	4	11	95,234	67	2	18			87	90	— 0.1	395,758	60	7	5	67	69	56
Total U. S.	1,235	212	591	160	40	2,238	2,186	2,083	7,405,200	7,837	1,317	3,957	1,008	273	14,392	13,302	+ 11.5	50,792,259	3,579	409	436	3,988	3,996	3,917

* Includes distillate wells. [1] Wells completed in 4 weeks, or 28 days, ended July 28, 1945. [2] Wells completed in 4 weeks, or 28 days, ended July 29, 1944. [3] Wells completed in 4 weeks, or 28 days, ended June 30, 1945. [4] Wells completed in 30 weeks, or 210 days, ended July 28, 1945. [5] Wells completed in 31 weeks, or 217 days, ended July 29, 1944. [6] Water input, gas injection and salt water disposal wells.

Foreign Oil Can Be U. S. Asset

A proposal to store imported oil in U.S. fields for use in future emergencies

By OSCAR HATCHER
Geologist, Helmerich & Payne, Incorporated

ONCE again within a lifetime the American oil industry has had to lubricate a world war. As we approach the end of World War II, leaders in the industry are becoming increasingly conscious of the fact that this country, while possessing only 15 percent of the world's present known oil reserves, has had to supply 70 percent of the wartime demands.

No longer is the United States the world's storehouse of petroleum; the "balance of oil power" has shifted. The United States is dangerously close to becoming a "have-not" nation in the realm of petroleum reserves. Today, the Middle East has about three times more known oil than we have, and these reserves have been developed at a cost of only 150 wildcat wells—a bare 6 percent of the total number of wildcat wells drilled annually in this country. With its estimated 50 billion barrels, the Middle East is now the world's storehouse of petroleum, for the United States can today only count upon some 20 billion barrels of reserves in the ground.

Must Eventually Import

Whether we like the situation or not, it is a cold fact that, sooner or later, we must import foreign oil. Like a swollen stream that overflows its banks, the huge reserves of oil in the Middle East and in South America must, sooner or later, come on the world market. It is up to us to see that this sea of oil does not engulf us; that it does not pour into this country uncontrolled and unchecked, for if it does it can result in only one disastrous consequence, the ruin of the petroleum industry with its consequent repercussion on the entire economic structure of the country. It could well precipitate not only a nation-wide, but a world-wide depression and may even cause a third world war.

It is to guard against such a disaster and to make cheap, foreign oil serve us, rather than destroy us, that the writer proposes the following plan for the consideration of government and the oil industry:

1. Legislation giving the government the right to acquire through purchases or lend-lease repayment, approximately 5 billion barrels of crude oil to be delivered to this country over a period of years by Great Britain and Russia.

2. Acquisition by the government of depleted oil fields in the United States to be used for storing the oil acquired from Great Britain and Russia.

3. Legislation guaranteeing that oil so purchased and stored in underground storage in depleted fields will never be used for domestic purposes, but only in the event of future war, thus removing a threat presented by unrestricted importation of cheap, foreign oil.

Storage Feasible

Engineers maintain that it is quite feasible to return crude oil into depleted underground storage. This practice has been successfully tried out in the storage of natural gas. Fields selected for storage purposes should be reasonably free of water. A survey of depleted fields in this country will doubtless reveal ample storage for the estimated 5 billion barrels of oil which the writer believes will insure an ample supply to the country in the event of war.

Said oil would be returned to the ground under pressure, using either natural gas or nitrogen for that purpose. This point is important since, in the event of an emergency, the nation demands that the stored oil be recovered as quickly as possible. By returning the oil to underground storage with natural gas or nitrogen it would thus be returned with sufficient energy to flow to the surface when needed. Nitrogen is suggested as cheap energy since this non-inflammable gas can be made at the ratio of 10 million cubic feet of nitrogen per 1 million cubic feet of natural gas.

It may be pointed out here that such stored oil will be more economically recovered than new oil since it would flow through bore holes already drilled and which would be capped against the day when it becomes necessary to reopen them so as to bring the stored oil to the surface. Thus would be eliminated the need to drill new bore holes with a consequently large saving in material and money.

Such a large "purchase order" would stimulate development of foreign oil fields and result in the sale of considerable oil field equipment by manufacturers in this country, thus contributing to more jobs and greater prosperity.

Under the above plan the nation would be assured sufficient crude oil to fight a war, if necessary. By stipulating oil payments from Great Britain and Russia in settling lend-lease accounts it will not only replenish this country's empty oil reservoirs but it will stimulate world trade in oil field equipment and transportation.

Use for Big Inch

The importation of the suggested 5 billion barrels of oil will necessarily take many years to realize and for this purpose it is suggested that the so-called Big Inch and Little Big-Inch pipe lines be utilized in transporting the crude oil from the east coast back to the southwest. This will solve the perplexing problem of what to do with these pipe lines which represent millions of dollars of the taxpayers' money.

Adoption of the above plan will, in the writer's opinion, avert the threat of uncontrolled imports of cheap, foreign crude oil which might well result in disaster for the independent producer; ease foreign competition for American oil firms now engaged in developing foreign crude oil resources; partially reimburse the American taxpayer on his lend-lease outlay; promote national and international industry and good-will, thus contributing to world-wide business recovery and, most important consideration to the American people, make it certain that in the event of a future world war this country will not be "caught short" in its reserves of crude petroleum.

Mississippi Board Gathers Data for Hearing by FPC

Plans for compiling testimony to be presented to the FPC in New Orleans October 30 were discussed at a meeting of the Mississippi Oil and Gas Board with Governor Bailey.

Present at the session were David Gray of Houston, who is doing similar work for Texas, and Alec M. Crowell, loaned to the state by the Mississippi Oil and Gas Engineering Committee as consulting petroleum and natural gas engineer to assist in gathering information for presentation to the FPC.

No More Sweet Gas Needed For Making Carbon Black

The War Production Board last week advised the Texas Railroad Commission that no more sweet gas for carbon black manufacture would be necessary, the supply of black on hand being sufficient.

Indian Lands Offered

Sealed bids for oil and gas leases on 67 tracts of restricted lands of members of the Five Civilized Tribes will be received at the office of Superintendent A. M. Landman at Muskogee, Oklahoma, up to 10 a.m., September 4. Tracts are in Washington, Creek, Okmulgee, McIntosh, Okfuskee, Hughes, Seminole, Coal, Garvin, Stephens, Jefferson, Marshall and Carter counties.

SIMPLICITY IS THE FIRST REQUISITE OF SAFETY

Look for the hazards that aren't there!

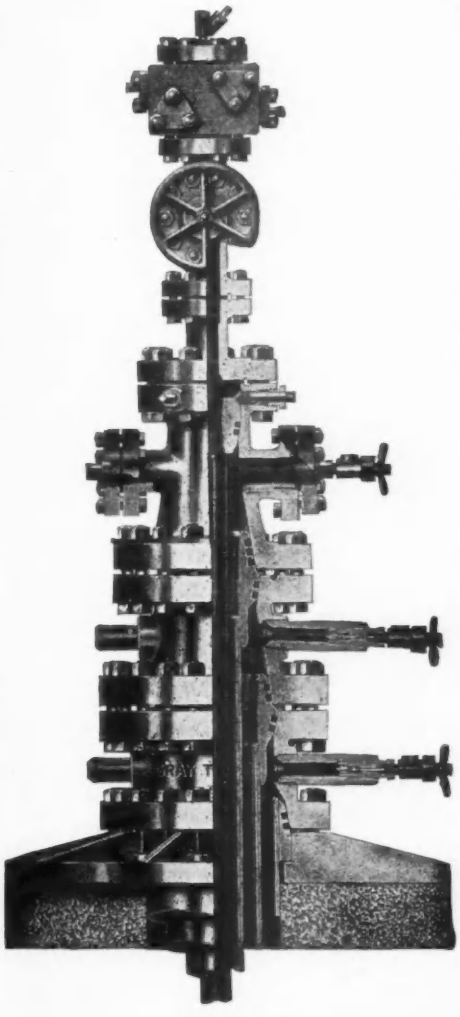


FIGURE 1A

Complete Well Head Assembly equipped with Composite Manifold, Valve Removal, Installation and Removal.

In Well Control, you eliminate hazards when you pick out a System of Well Control which provides for removal of each part as quickly as its operating function has been completed.

Many control mechanisms, such as **blowout preventers, valves, strippers,** etc., must depend for seals upon the use of short-lived, low strength packing materials and greases. These highly flowable materials stand up beautifully under factory tests when new, but disintegrate quickly in the field when called upon to operate over the life of the well.

In Gray Systems of Well Control, parts that have been removed after having performed their operating functions are NOT potential sources of trouble. The hazards disappear;—simplification results. It's economical, too, for these parts are used again and again on succeeding wells, instead of on the only well to which they have ever been attached.

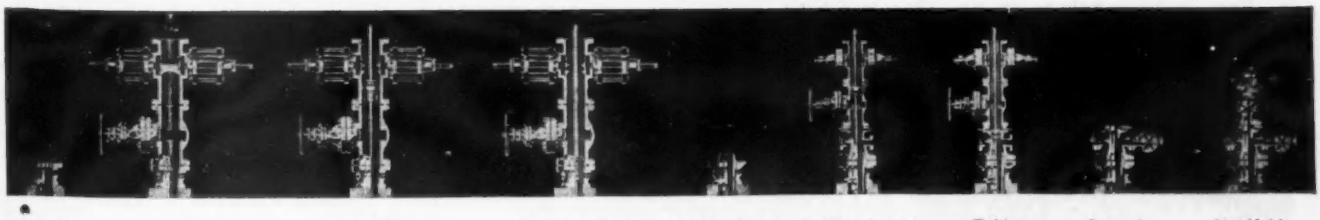
BUT the main advantage lies in the fact that, at the time of removing a part, you have likewise removed a hazard.

The whole is greater than any of its parts. Look for the hazards that aren't there.

THE WHOLE IS GREATER THAN ANY OF ITS PARTS

GRAY
TOOL COMPANY
HOUSTON

West Coast Distributor: WAGNER-MOREHOUSE, INC., Los Angeles. *Export Representative:* GUY E. DANIELS, 30 Rockefeller Plaza, New York City



Casing Head Attached | Drilling | Running Casing | Casing Landed | Drilling Control Equipment Removed | Drilling-in and Running Tubing | Tubing Landed | Control Equipment Removed | Manifold Attached

Combination Chaining Method Locks All Three Block Gates With One Padlock

Block gates on a gas transmission truck line must be safeguarded against tampering, to protect the system against serious damage as well as to eliminate possible serious accidents were the full volume of gas either released or suddenly cut off without advance notice at the compressor stations.

BLOCK GATES

Padlocks for such installations are hard to get and, even if sufficient locks were available, the locking of a gate wheel to the gate itself is not always a simple job if provision be made against securing slack enough for the chain to be jerked in two or cut by cramping it against the wheel.

One system utilizes a single padlock for securing all three valve wheels, through the medium of two special chains. The chains are made with a ring in one end large enough to slip over the extended radial handle on the rim of the wheel. The chain is wrapped once around the rim, then pulled through the ring, and thence to the central gate. The other release gate is secured in the same manner, and both chains are looped through the block gate wheel in such a manner as to prevent its being turned, the padlock being passed through links of both chains to tie them together and prevent either being pulled out far enough to permit breaking the seal of the valve disk.

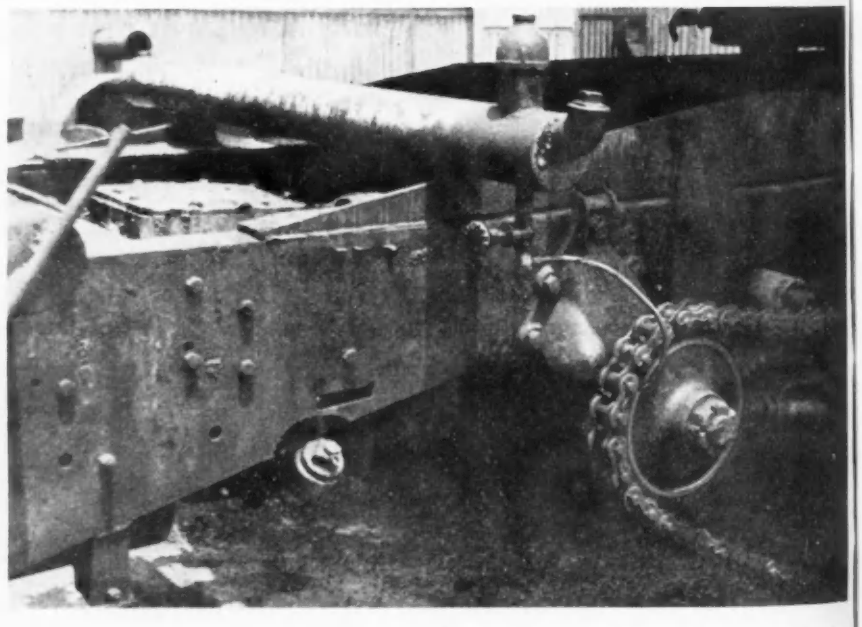
With such a hook-up, only one key is required for a block unit, and the entire unit is secured or freed by manipulating one padlock and two lengths of chain.

Truck-Frame Mounted Lubricator Saves Drive Chains

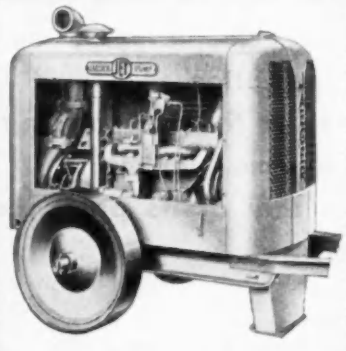
A simple yet effective device for providing long lasting lubrication for oil field service trucks has been designed by the driver of one of these trucks. There are probably no harder driven trucks than those used in the hauling of oil field material. Lubrication of the essential chain drive on some of these trucks must be constant and positive. Several types of oilers have been tried but probably none more novel than the one illustrated. It consists of a four-foot piece of three-inch pipe, bell reducers and copper tubing leads with brass cocks or needle valves in the drop-leg.

CHAIN UPKEEP

The three-inch pipe also has a filler opening welded in near one end. The opening has the usual pipe plug for a cap. The copper tubing leads are of such length that they easily reach over the chain sprockets. The soft copper tubing makes bending into the correct position easily accomplished. After filling the three-inch pipe with lubricating oil the brass cocks are set so as to feed the oil to the chains a drop at a time. Because the pipe holds considerable oil the human error of neglect can in most cases be compensated for.



The Largest Contractors Equipment Company in the South



This Jaeger model 4-P has scores of uses on pipe lines. Used for cleaning slush out of storage tanks; to clean out reservoirs; to pick up oil in case of line break and of course for pumping out water wherever necessary. It delivers a large volume at low pressure.

BROWNING-FERRIS MACHINERY CO.
DALLAS - HOUSTON

PIPE LINE HINTS

Channel Iron Footings Extend Support Bearing Surface

The use of short sections of channel iron material for footings beneath pipeline supports has resulted in the saving of many man-hours in the pipeline and production departments of one company.

MAIN LINE SUPPORTS

Establishing a firm footing for the many pipe line supports, particularly where the line crosses depressions or small gullies, usually meant the improvisation of some sort of feet which could be welded to the base of the steel supporting members, and it ordinarily meant cutting out individual bases at the site—either of steel or from wooden blocks. Present practice is to obtain a quantity of salvaged derrick channel iron material, and cut up the light channel into 6-inch lengths. Since there is never any stress placed upon them the bases can be cut up regardless of the many bolt holes or slight bends that might exist in the channel material.

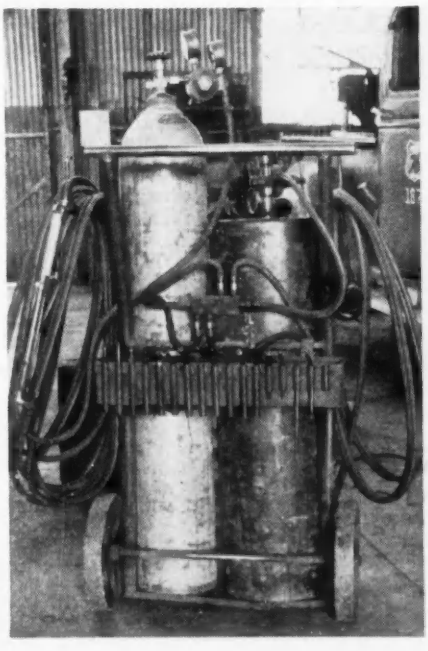
Frame of Welding Unit Carries Tip Display Rack

On the back of the frame in which the cylinders of oxygen and acetylene are supported and wheeled around the station or shop to bring the supply close to the point of use, one welder rigged up a rack in which

WELDING EQUIPMENT

are carried all the assorted tops and torches used to sever or weld various thicknesses of metal.

The rack consists of a wide cross member, along which have been ranged notches or spring supports into which the various accessories may be slipped. The supporting holder is short enough so that the end of the tip is exposed, making selection of the proper tip merely a matter of visual inspection.



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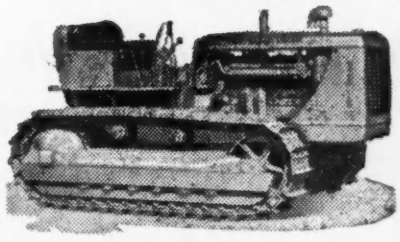

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The Clarence L. Boyd Co., Inc.
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Tulsa, Oklahoma

Installation of Spherical Type Bearing Relieves Pitman of Misalignment Stresses

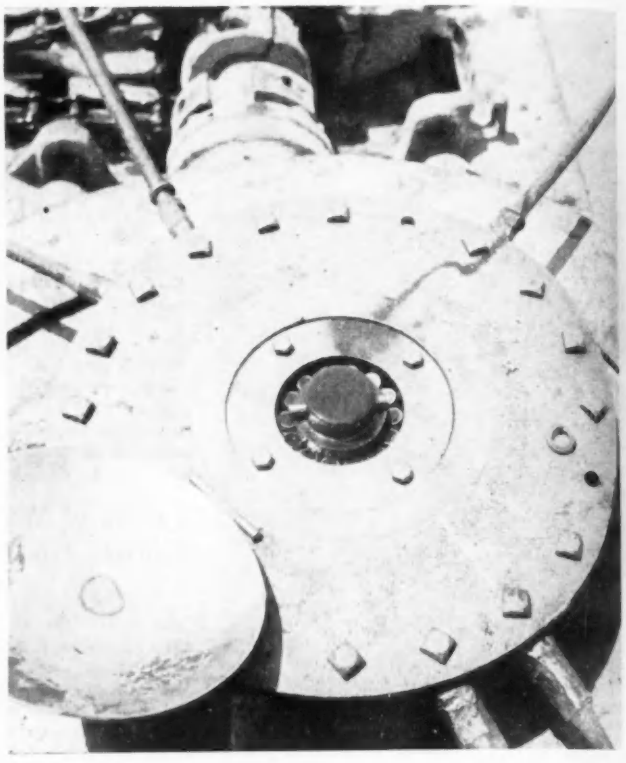
CENTRAL POWERS

In pumping wells by the jack line system, no piece of equipment of the system receives harder use or suffers more severe strains than do the pitman shaft and bearing. Only in rare cases are all jack lines coming into the plant on the same horizontal plane. In all other cases where these lines are not in the same plane, a large unbalanced lever action occurs. This leverage causes a working or reversal of stresses in the pitman with each turn of the jack plant. This tendency to bend the pitman shaft has been eliminated in one case by replacing the conventional type bearing with one of the spherical or misalignment type.

Bearings of this type allow an off-center pull of several degrees without undue stress being placed on the shaft. Since the spherical type of bearing is made in standard sizes no changes need be made in the bearing housing or shaft.

Since placing such a bearing in operation one operator reports that it is possible to see a lateral movement from a true horizontal plane of as much as one quarter of an inch. Before installing this bearing this movement must have been absorbed by a bending of the pitman shaft, or by distortion of the rod lines close to the point where they are attached to the pitman. Usually the stresses are divided, and service failures occur in both units.

The spherical-type bearing requires no additional equipment to retain the pitman disk in place, as the variations in level all take place around the bearing center as pivot.



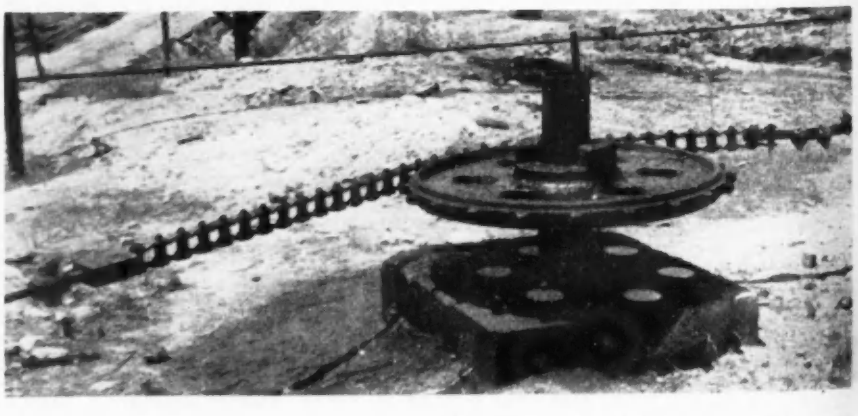
$5.00 is paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, P. O. Box 2608, Houston 1, Texas

Sprocket and Short Chain Carry Pull Line Around Bend

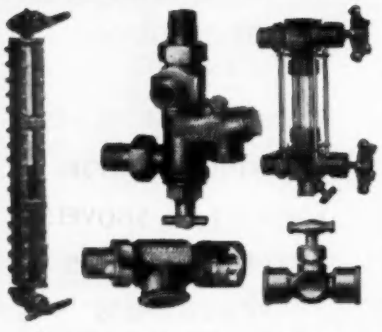
JACK-LINE PUMPING

A device used by one operator for changing direction of the pull exerted by a jack line is shown in the photograph. As is frequently the case, the oil lease is in hilly country and it is not always possible to get a straight line set-up between the jack plant and the well, and some means of changing direction of the line is essential. A discarded sprocket wheel, a length of rotary chain and some odd lengths of pipe were all that were needed in this case. The pipe was set firmly in the ground, then a larger pipe was slipped over the stationary pipe and the sprocket wheel placed over this. Hooks were provided at each section of the jack lines and these were fastened on to the ends of the rotary chain. Lubrication is accomplished by using heavy oil on the pipe shaft. No slack motion was noticed in this turn.

After this change of motion was set up it was found that the hook-in chain had another advantage, that of taking up slack that developed in other parts of the system, simply by shortening the unit one link.



PENBERTHY
QUALITY
PRODUCTS



Penberthy liquid level gages of various types—injectors—ejectors—all so widely used throughout the oil industry because they have always been dependable under the most severe service conditions.

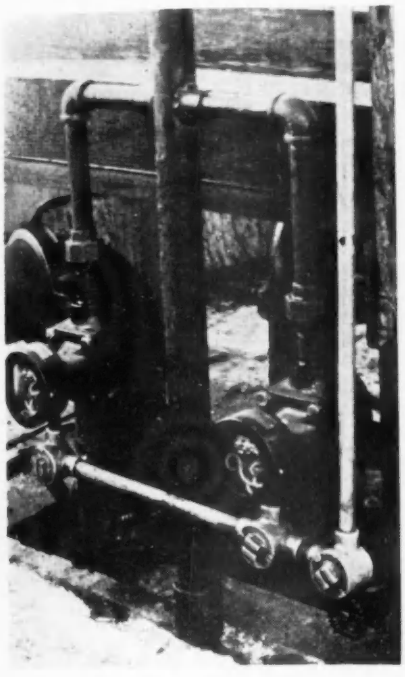
All are of rugged construction and made by an organization with 57 years experience in the manufacture of quality products.

See Pages 2450 to 2455. Composite Catalog

PENBERTHY INJECTOR CO.
DETROIT, MICH. Canadian Plant WINDSOR, ONTARIO

PRODUCTION HINTS

Loop With Mercoid Switches Safeguards Loading Pumps



When a shipping pump on a battery of tanks is started after the tank is gauged out, shutting down of the station can be accomplished easily with mercury switches. A 3-inch standpipe is welded into the suction line which acts as a fluid column, filling rapidly regardless of which tank is opened for shipping.

PUMP CONTROL

A manifold containing two separate lines, both open to the standpipe, carries individual mercury switches wired into the ignition lines of the engine driven pumps. The mercury switches, float controlled, close the ignition wiring of the magnetos so that the pump selected for handling the oil will continue to run until the fluid reaches a predetermined level, at which point the ignition circuit is broken, shutting down the pump.

The ignition circuits are carried in conduits, completely enclosed and protected against accidental breakage and contamination by oil, eliminating fire hazard which otherwise would exist with exposed wiring, even when carrying the relatively low voltage ignition current.

Oil Reservoir in Jack-Line Support Reduces Maintenance

On large leases where many wells are pumped by the jack line system, lubrication of the many jacks and jack line supports presents a time-consuming problem. One operator has helped solve the problem by designing supports, which contain sufficient oil in a reservoir to last several weeks. The support consists of the usual inverted Tee, but instead of external bearings around the cross shaft, a long internal bearing is provided.

EQUIPMENT LUBRICATION

This internal bearing is made of two-inch pipe as a core and around its outer surface and between the inside of the Tee head, babbitt has been poured. The ends of the two-inch pipe have been sealed off and a sucker rod coupling has been welded in an upright position close to one end. A hole has been drilled through the pipe under the coupling allowing oil to be poured into the inside of the two-inch pipe through the coupling. Several small holes have been drilled through the two-inch pipe and the babbitt to allow oil to feed to all parts of the bearing. A pumper need only pour oil into the sucker-rod coupling at intervals, filling the two-inch pipe and the babbitt to allow oil to feed to all parts of the bearing. A pumper need only pour oil into the sucker-rod coupling at intervals, filling the two-inch pipe and thus assuring a supply of oil to the bearing at all times, while a cap or plug in the filling spout prevents entry of water.

00

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Piston Rings

These rings are designed especially for handling oil, salt water, and other fluids containing chemicals which cannot be handled satisfactorily with other types of rings. Spring tensioned or tool tensioned furnished with step or diagonal cut. Segmental furnished with step or radius cut and with crimp or bull ring type expanders.

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J&L PERMASET PRECISIONBILT PRE-FORMED WIRE ROPE

The Outlook

Sharp reduction in crude oil production is ahead. General belief is petroleum consumption will not exceed, if equal, 1941 rates for at least a year, probably two years. This means one million barrels must be cut off current crude producing volumes. Proper distribution of the forthcoming crude production reduction among states and fields is not going to be easy. Some areas will be harder hit than others.

* * * *

Domestic civilian demand for motor fuel will increase quickly with end of rationing, but will not offset decline in military consumption. Full return to prewar gasoline consumption of 1,700,000 barrels daily unlikely until new cars come onto market in big volume. Gasoline stocks in meantime may grow.

* * * *

Motorists probably will consume not more than 1,600,000 barrels of gasoline daily during next 12 months, or only 200,000 barrels per day more than allocated for this use in recent months following enlarged rations. Total military-civilian use of gasoline has been 2,200,000 barrels daily lately, with military using 800,000 barrels. Latter will drop more than 200,000-barrel civilian gain.

* * * *

Fuel oil consumption will increase more rapidly than other petroleum products, with heating oil showing sharpest gain. Likely coal shortage next winter will spur conversion of northern heating plants to oil. Big tanker fleet plus pipe line shipments will permit moving adequate supplies to Atlantic Seaboard consuming region.

* * * *

Refiners must adjust yields to new consuming picture, giving less emphasis on such products as aviation gasoline, toluene, etc., more on fuel oil especially heating oil.

* * * *

Motorists will get better quality motor fuel immediately. More lead for this purpose was allocated recently. End of war removes completely all limitations on quality.

* * * *

Despite numerous problems, oil industry will find reconversion easier than other major industries. Refiners can switch to civilian product manufacturing almost overnight, while others must retool and wait on raw materials.

* * * *

Pipe line construction and reconditioning should be sizeable during the next 12 months or more. Several long natural gas and product projects are in the offing and numerous short crude oil carriers will be built. With return of free competitive buying, companies will want their own systems in fields served by only one or two lines under wartime emergency.

* * * *

Demand for fuel oil in the East, now that rationing has been lifted, may result in more than 50 percent of the Big Inch's capacity being utilized for transporting 28-34 gravity Permian Basin Oil. See page 76.

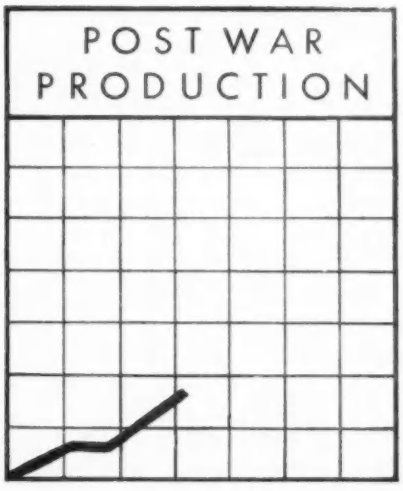
* * * *

Tax adjustments will help smooth the way through reconversion for many corporations. Internal Revenue Bureau has speeded up its regulations for application of the relief bill passed by Congress last month, so that its provisions may be reflected in the payment of the September 15 installment.

* * * *

Reconversion will be a lengthy process extending over a period of months. The War Department, for instance, estimates demobilization may require as much as year and a half and OPA officials believe it may be close to a year before the last of the price controls can be lifted. Workers will be migrating, from war centers back to their homes or to other areas in search of new jobs, for many months.

Tackle THIS JOB with POWER



THAT'S CAPABLE OF *Doing* THE JOB

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Use Utility Electric Power!

PETROLEUM ELECTRIC POWER ASSOCIATION

Box 1498 Oklahoma City, Oklahoma

The Week's News

WITH the worst war in civilized history finally brought to a victorious conclusion, administration and industry last week turned their energies toward restoration of a prosperous peacetime economy, spurred by the necessity of finding employment for possibly 8 million war workers who will be out of jobs by next spring and additional millions of men and women who are to be released from the armed forces.

Tearing Down War Machine—In Washington, the first of two days declared holiday for government employes saw the war agencies operating at full blast, tearing down as much of the war structure as could be quickly razed, as proof of the administration's sincerity in promising all-out support for quick reconversion. Story below.

First Cessation of Rationing—For the public, the first concrete evidence of the end of the war was the lifting of gasoline, fuel oil and canned goods rationing. For industry, it lay in explanatory statements from the various war agencies that all controls possible would be wiped out as promptly as the necessary orders could be written. Pages 67-68.

Early PAW Liquidation—No time will be lost in lifting restrictions on the oil industry, PAW officials declared as a number of regulations were rescinded and hope was expressed that the agency could close its doors by the end of the year. Page 68.

Oil Markets and Problems—The end of the war brings new markets and new problems for the oil industry. In the first field lie the opportunities for commercialization of some of the new and improved products developed during the war. In the second are the questions of subsidy, disposition of wartime facilities, particularly the Big Inch pipe lines, and the future of synthetic rubber.

Tax Adjustment Relief—With unintentional timeliness, the Internal Revenue Bureau issued the regulations under which corporations may make immediate use of their postwar credit of 10 percent of their excess profits taxes, permitting them to reduce their September 15 and December 15 installment payments accordingly, half of the full deduction with each payment. Page 69.

Atomic Energy and Natural Gas—In the atomic bomb the natural gas industry sees argument to defeat all attempts to restrict the export and end use of gas, indicating that it will be pressed to the fullest in the forthcoming Federal Power Commission investigation. The industry figures that within the 50 years for which we have gas reserves, atomic energy will have been developed to the point where gas, oil and other fuels will be obsolete. Pages 41 and 70.

Precipitation Monopoly Charged—The Department of Justice is moving against an alleged world monopoly in the manufacture and distribution of precipitation gas-cleaning units, used in the production of high-octane gasoline, synthetic rubber and many other products, in a civil suit in Los Angeles named three American and five foreign companies as parties to a conspiracy to control patents, divide markets and keep prices high. Page 72.

Texas September Certification—No more than 200,000 barrels reduction in PAW's original September certification for Texas of 2,366,000 barrels daily is expected. East Texas producing days may be reduced, movement of West Texas sour crude to the Pacific Coast will drop production in that area. Page 71.

FPC Gas Hearing Schedule—Dates and places have been set for hearings which will follow FPC's initial one on natural gas scheduled at Kansas City September 18. Page 68.

PIWC's Next Meeting—The September meeting of PIWC may be moved up as much as three weeks. Dissolution may come soon although some think it should be continued as an all-industry organization. Page 69.

Oil Returns from Overseas With High Honors, War Restrictions Are Lifted

First concrete evidence of the return of peace come shortly before noon August 15, with announcement by the Office of Price Administration of the immediate lifting of gasoline and fuel oil rationing.

The order followed on the heels of an announcement by the joint Army-Navy petroleum board that it had reduced its takings of oil products for the armed forces by 56 million gallons a month.

Orders lifting wartime restrictions came fast from war agencies, working full blast despite President Truman's announcement of a two-day holiday for federal workers. They began to appear immediately after John W. Snyder, Director of War Mobilization and Reconversion, issued a "keynote" statement blueprinting the administration's program for reconversion.

Snyder warned the country that it had a big job ahead of it, that as many as 8 million persons may be jobless before next spring, and estimated it will take at least 12 to 18 months to reach the expanded peacetime production necessary to get the unemployed back to work.

Price ceilings and wage stabilization, he said, must be continued until all danger of inflation completely disappears. Rationing of certain scare commodities will be continued for a while, and transportation controls are to be maintained temporarily.

Many wartime production and distribution controls will be removed at once, Snyder said, but some must be retained to expedite production, break bottlenecks, prevent inventory hoarding and maintain economic stabilization. Inventory control will be largely relied upon by the War Production Board to make possible the quick release of materials and the speedy acceleration of civilian production, it was disclosed by Chairman J. A. Krug.

Oil Industry Supplies

Foreshadowing a marked expansion of oil industry supplies in the near future, Krug declared that "all but a handful of orders will be cancelled within a few weeks." Orders controlling materials that are still in short supply, such as crude rubber, lumber, etc., will be retained, however, until shortages ease or until there is no longer any danger of a scramble for them.

Other steps in the WPB reconversion policy call for release of a huge industrial building program through a plan to relax industrial construction controls to be put into effect within 30 days, and removal of ceilings on production of automobiles and other consumers durable goods permitting all-out operation.

WPB, however, will retain its powers for breaking bottlenecks or giving protection where needed to military or highly essential civilian or export needs, but these powers, Krug said, will be used only where necessary and business should not rely on priorities help for conducting its normal activities.

"Practically all materials and resources needed by American industry will be available in abundance," he said. "American business men, managers and workers must meet this challenge and use their initiative and resourcefulness for making the thousands and thousands of decisions necessary to get American production rolling again on a peacetime basis."

FEA Commerce Plans

Policies of the Foreign Economic Administration call for quick restoration or normal trade and commerce, but in an orderly manner to avoid raising new problems.

Restrictions such as licensing of exports and control of imports will be

eased as quickly as is possible without jeopardizing the interests of our military forces and domestic industry, it was assured by Administrator Leo. T. Crowley.

Lend-lease will be continued on a limited basis, but projects based on war needs will be closed as rapidly as possible to clear the way for private trade "employing the peacetime instruments of credit which are available to governments and private interests," Crowley said.

"I feel that the end of the war opens vast possibilities for world trade, and that the role of the United States will be a vital one," he declared. "I feel also, however, that wherever possible government should be employed principally as a factor in aiding private interests assume responsibilities for that trade. Instruments intended, therefore, to strengthen government regulation for emergency needs, as has been the case in wartime when the need for marshalling and controlling our assets was paramount, should be eliminated as expeditiously as possible when the emergency has passed."

At the OPA, Administrator Chester Bowles declared "nobody is any happier than we that, as far as gasoline is concerned, the day is finally here when we can drive our cars wherever we please, when we please, and as much as we please. We'll be happier still when tires, too, can go off rationing.

Oil to Peacetime Role

This announcement of the end of rationing was followed by an assurance from Administrator Ickes that ample quantities of civilian gasoline will be available immediately and that supplies of heating oil and fuel oil will be adequate to meet normal peacetime requirements.

"The great battle won, oil returns to civilian life to resume its peacetime place," Ickes said. "It has played a role of tremendous significance in the war and returns now from overseas with highest honors.

"After more than four years of the unhappy duty of imposing restrictions upon the American public in order that military orders for oil might always be met in full—as they have been met without exception—I make this announcement with a feeling of profound satisfaction and relief."

Deputy Administrator Davies announced that quality restrictions on gasoline also will be lifted immediately, but pointed out that a few days will be required to move increased supplies to some areas.

"Automatic" Conversion

"Peacetime standards of quality will now be re-established as quickly as the required refining and distribution adjustments can be made," he said. "Sufficient quantities of the components for upgrading to prewar levels are now available and no time will be lost in utilizing them for the civilian benefit.

"Plans for the transition period have been perfected for some time. So far as the production, manufacture and distribution of petroleum products for the civilian economy are concerned, the conversion now takes place almost automatically."

At the OPA, however, a determination was voiced to avoid a repetition of the situation which followed the last war, when price controls were removed too soon and economic disaster overtook the country 18 months later, and the agency will retain its price ceilings until business has been definitely stabilized.

Vigorous OPA Enforcement

All unnecessary regulations will be weeded out, and flexible, speedy procedures will be developed to provide individual adjustments necessary to cover current increased labor and material costs, Bowles said, "But the rules that stay to guide us through this dangerous period must be vigorously enforced.

"Let there be no misunderstanding of OPA's intention to vigorously enforce the price and rationing controls as long as they are on the books."

He warned: "If we did anything less, we would be denying the public the safeguards which the stabilization program promises.

"Our enforcment actions will be stepped up to the limit of our manpower, and the weight of our enforcement will be shifted to price control as we are able to drop rationing programs one by one. The Attorney General has told me that OPA will receive the fullest support of his office in carrying out its enforcement program."

FPC Schedule for First Gas Hearings

The Texas chapter of hearings in the natural gas investigation will open at Dallas November 27, it was announced last week by the Federal Power Commission simultaneously with a denial that the regional hearings will be postponed because of the transportation situation anticipated this fall.

The commission said that first hearings, to open at Kansas City September 18, will be held in the City Council Room in the City Hall. From Kansas City, the investigation will jump to Oklahoma City, where hearings will start October 9 in Room 609 of the County Courthouse Building, and will move to New Orleans October 30 for hearings in Room 245 Post Office Building. The location for the Dallas hearings will be announced later.

Acknowledging press reports that the hearings might be postponed because of the transportation crisis, the commission said no reason exists for such action since witnesses will not be required to travel any great distances.

Many Restrictions Lifted, PAW Hopes For Liquidation by First of the Year

Revocations of wartime restrictions fell fast and heavily upon the oil industry last week as the surrender of Japan started the wheels of liquidation in PAW.

Declaring that no time will be lost in lifting the restrictions and regimentation that have been imposed since the Office of Petroleum Coordination was set up by President Roosevelt May 28, 1941, Deputy Administrator Davies expressed the hope that the agency could close its doors at the end of the year.

President Roosevelt's executive order carried no termination date but both Administrator Ickes and Davies have repeatedly given assurance that PAW would be abolished when its wartime duty was completed.

"My guess would be that we can wind up all the barbed wire between now and the end of the year," Davies said.

"We will move promptly, but in a manner calculated to accomplish a smooth and efficient transition. In the case of the oil industry there is no reconversion required in the usual sense of the word. Various production, refining and distribution adjustments must be made now that unit-operation of the industry ceases to be necessary but, in general, the same kinds of products are being produced today as are required in peacetime; the change lies principally in the direction of contraction and rearrangement.

"The oil industry enters the peace period in healthy condition and excellently equipped to assume overnight its peacetime role."

Final Mop-Up

While many of the industry men who have been faithfully holding down important desks in PAW are anxious to get back to their regular jobs, there were indications that they would be asked to remain for a brief period to get the mopping-up process well started, although no impediments will be placed in the way of officials whose further service in Washington would create hardship.

First action taken by PAW to restore the peacetime oil economy was the elimination of production restrictions on premium gasoline, while immediately followed the the lifting of gasoline and fuel-oil rationing by OPA.

This was followed by rescission of a large number of orders affecting the refining branch, and a recommendation for discontinuance of shipments of West Texas crude to California refineries. Restrictions on liquefied gas were lifted, and the ban on conversion of home heaters from coal to oil was revoked.

In sharp contrast with the situation only a few months ago, when PAW and the industry were concerned over transportation because of the lack of tankers, there are now oil-carriers "all over the place," as one official put it, and the use

of rail cars is expected to drop very soon almost to prewar levels.

Some spot shortages of temporary nature were anticipated, however, as the public again resumed automobile use in a big way, but these will be due to transportation conditions which will be quickly remedied.

With the cut-back in military requirements, PAW officials prepared to discontinue the making of production certifications which the states were expected to follow, and this week will issue "advisory" certifications which will reduce crude production to at least efficient levels. These advisory certifications will be continued for a month or two, but merely as a guide to state officials.

Regulation of spacing and other production conditions will be turned back to the states without delay, it was indicated, and restrictions on drilling and the use of materials will be shoved overboard.

Sample Reduction Cited

The first indication of the reduction to be recommended in crude output rescinded a certification of a rate of 2,366,000 barrels daily of all petroleum liquids for September in Texas, which included 10,000 barrels daily of oil from asphalt-type fields, the first time such product has been included in estimates of needed production.

A later recommendation from PAW eliminated that type from its calculations and, in suggesting the discontinuance of westward rail shipments of West Texas sour crude, paved the way for a cutback of 30,000 to 40,000 barrels daily in that area.

Davies announced that he had already recommended to the War and Navy departments the discontinuance of the subsidy paid by the Reconstruction Finance Corporation to cover the higher cost of moving oil by rail to the West Coast. Discontinuance of the movement, he said, however, would not necessarily result in any immediate shutdowns in California refineries, since enough crude is en route and in storage there to supplement local sources until the refineries can make such arrangements as they desire.

Moving promptly to eliminate wartime controls no longer necessary in petroleum operation, Davies on August 17 terminated practically all restrictive orders administered by PAW's refining division.

Davies stated that the termination orders were in accordance with announced PAW policy of bringing wartime controls to an end as soon as possible, and that telegrams had been sent to all refineres, ending many of the controls as of August 15. Other regulations, he said, will be continued for a 30-day period to permit the refineries to complete certain contracts, and certain forms which, as required to be submitted, will be continued for a two-months period in order to complete the records and allow final settlement of contracts.

In cancelling the controls, Davies expressed PAW's "keen appreciation" of the "splendid cooperation and wholehearted effort" of the refinery branch throughout the war. "Industry has indeed distinguished itself in the service of the nation," he said.

Orders Terminated

Orders terminated as of August 15 included the following:

PAW Recommendation 31, as amended, concerning the organization and exchange of technical information among companies forming the Neches Butane Products Company and its associated copolymer plants;

No. 40, covering refining and distribution of automotive lubricants containing additives and curtailing additives;

PAW Directive 52, relating to production of raw materials for synthetic rubber;

No. 75, restricting disposition of isobutanes and butylenes otherwise than for the production of synthetic rubber, aviation gasoline or their components.

No. 77, except that, until further notice, in order to assist in orderly disposition of available supplies of finished aviation gasoline of higher than 130-octane rating (super-fuel), the Army petroleum products allocation committee will continue to allocate and PAW to distribute these fuels. The same procedure will also continue to apply to offshore shipments of alkylate and other high octane blending agents; and

No. 80, limiting the manufacture of specified grades of asphalt for road use;

PAW Administrative Order 16, restricting the delivery, use, refining of or other disposition of petroleum sulfonates;

PAW distribution orders 21, imposing limitations on manufacture and distribution of premium motor fuels; and

No. 22, setting minimum viscosities for civilian fuel oil manufactured or delivered in PAW District 5;

Telegraph directive of July 13, 1944, signed by Bruce K. Brown, concerning octane ceiling on house-brand and premium gasoline:

Telegraphic directive of July 12 or 13, 1945, signed by A. P. Frame, setting specific volumes of lubricating oils to be manufactured by 21 companies during the last six months of the current year;

PAW information forms Nos. 5, 7, 13, 17, 33, 39, 41, 48, 53 and S-15.

September Orders

Effective September 15, the following controls will be terminated:

PAW recommendations No. 23, concerning the pooling of patents and tech-

Change Possible in Next PIWC Meeting Date; Continuance of Body Is Suggested

Possibilities that the PIWC meeting scheduled for September 26 might be advanced by as much as three weeks were raised last week by the sudden end of the war, but there are conflicting opinions among members of the council which will have to be resolved before a decision is made.

It was disclosed that some members wanted a meeting as soon as possible after the surrender of Japan, while others thought that Deputy Administrator Davies should prepare and distribute a program for liquidation of PAW and the council meet immediately thereafter. Still others took the position that Ickes and Davies were doing a smooth job of tearing down the war structure and the meeting on the scheduled date would be just in time to receive a progress report.

The scheduled meeting could be moved up easily by call of Chairman William R. Boyd, Jr., because when the council meetings were put on a bimonthly basis it was agreed that he should issue a call in the event of important developments. The next meeting of the council may be the last or next to the last before it winds up its affairs as a war organization.

Suggestions are being made, however, that some sort of all-industry organization should be carried into the postwar era, it being pointed out that the council has been the most active, most aggressive and most successful of all the industry advisory groups set up to assist the emergency agencies.

PIWC could not be continued in its present form because of anti-trust law restrictions which, suspended for the war period, again will become effective with the return of peace, but it is believed that there are important fields in which it could operate.

It has been suggested, for instance, that since the greatest achievement of the council was to unite the forces of the various trade associations and the district committees, which will pass out of existence with the closing down of PAW, it might carry on as an association of associations, similar to the United States Chamber of Commerce, the American Automobile Association and other organizations.

In this way, it is argued, the industry would have a rallying point for all interests, to present their views and fight their batles in Washington and elsewhere throughout the country where problems affecting the industry as a whole arose.

The matter is receiving considerable attention because of the fact that there are many questions due to come up in Congress and the government in the near future which will affect the oil industry. These questions include disposition of wartime facilities, including the Big Inch pipe lines; disposition of surplus tankers; national oil policy; diplomatic protection of foreign operations, etc.

The matter of continuing PIWC in some form, without infringing upon the programs or work of any of the individual associations, is expected to come up at the next meeting of the council, if sentiment has crystallized.

nical information on sulfuric acid alkylation;

No. 41, concerning the pooling of patents and technical information on fluid catalytic cracking and hydro-catalytic reforming;

No. 48, recommending that persons owning or controlling technical information on refining processes necessary to the war program make it available to one another under PAW directions; and

No. 55, providing for conservation of paratone; and

PAW Directive 76, providing for utilization and interchange of petroleum products and joint use of facilities in District 5.

For a two-months period ending October 15, the following forms will continue to be required:

No. 6, 8, 18, 36, 40, 42, 43, 44, 57 and S-16.

The minimum specifications for gasoline, kerosine, distillate and residuals under Directive 59 will remain in effect indefinitely.

Says Restricting Natural Gas Markets Made Obsolete By Use of Atomic Power

Possibilities of atomic energy raised by the perfection of the bomb which blew Japan out of the war will be the basis of a new drive on the part of the natural gas industry for the lifting of all restrictions on the exportation of gas from producing states, it was disclosed last week.

Commenting on the atomic bomb, John A. Ferguson, executive director of the Independent Natural Gas Association, asserted that "all argument over whether or not there should be any restrictions imposed on the exportation of natural gas and whether or not its end use should be curbed should now be closed."

While Ferguson did not attempt to minimize the time which may be required for the perfection of methods for utilizing the power of the atom, he took the stand that there is no longer any basis for contentions that natural gas should be held by the producing states to attract industry and for the use of future generations.

Ample Gas Reserves

"Conservative estimates made recently by the most competent authorities reveal that there are sufficient natural gas reserves now to last for some 50 years," he said. "If science continues to make the progress on the use of the atom in generating power that it has made in recent years it is not impossible that natural gas, along with gasoline, coal, electricity and all forms of power generation could become obsolete before the present known reserves of any of the depletable resources are utilized.

"A development such as this (atomic power) is a complete answer to those who urge the hoarding of natural gas for future generations. The natural gas industry has long contended that technological developments would always provide sources of power and energy. It is unreasonable to argue that the owner of a commodity, such as natural gas, should be denied the right to market it and in 25 or 50 years be faced with obsolescence."

The coal and railroad industries, Ferguson asserted, have fought the competition of natural gas on the ground that reserves were rapidly becoming exhausted and therefore gas should not be exported from the producing areas or used for what they termed "inferior" purposes. The atomic bomb, he held, has "thoroughly exploded" their arguments.

Left High and Dry

"Coming as it does shortly before the beginning of the FPC natural gas hearings," he said, "it seems that most, if not all, of the opposition to the position taken by the natural gas industry concerning exportation and use has been left high and dry.

"In the light of developments, any effort to convince the FPC that natural gas markets should be restricted in any way would appear foolish."

Increased Crude Demand for Month of August Forecast

August demand for domestic crude will average 4,935,500 barrels daily, an increase of 252,000 barrels, or over 5 percent, as compared with the same month last year, it was forecast last week by the Bureau of Mines. PAW certifications for August production called for 4,900,900 barrels daily.

The bureau pointed out that the August daily average will be considerably under the actual consumption of 4,953,000 barrels daily of domestic crude in May, the latest month for which figures are available.

"The production of domestic crude petroleum has continued to expand from 4,748,000 barrels daily in January, 1945, to a current record level of about 4,930,000 barrels daily in July," the bureau stated. "Total crude runs to stills average 4,736,000 barrels daily during the first quarter of 1945 and probably will average about 4,870,000 barrels daily in the second quarter. Current figures for July indicate total crude runs of about 4,945,000 barrels daily for the month. The consumption of domestic crude petroleum averaged 4,793,000 barrels daily in the first quarter of 1945 and may amount to over 4,900,000 barrels daily in the second quarter. The sharp rise in all operations relating to crude oil since April reflects the necessity of maximum output to meet fuel requirements during the coming winter."

Gas Injections Increase Illinois, Indiana Output

An "encouraging increase" of production from 37 wells in the Griffin and New Harmony fields in Indiana and Illinois was reported last week by the Bureau of Mines to have followed injections of gas into the McClosky limestone formation.

About 85,000 barrels of oil were obtained in two years by injecting 500 million cubic feet of excess gas through seven converted wells in the limestone reservoirs, yielding oil which might not have been produced through the continued use of primary recovery methods, the bureau said.

All of the gas used was denuded residue gas, or gas from which gasoline had been removed at natural gasoline plants.

Although air and gas under pressure have been used successfully for many years to increase the rate of production from sandstones, the Griffin and New Harmony field projects represent the first large-scale operations in limestone reservoirs in the deeper fields of the Illinois basin, it was pointed out.

Since secondary-recovery projects in limestone reservoirs are not numerous and involve problems not usually encountered in sandstone formations, it is believed the information gathered by the bureau will furnish additional technical guidance for oil producers, and is accordingly incorporated in Report of Investigations 3818, "Gas Injection Into the McClosky Limestone in the Griffin and New Harmony Fields," which may be obtained from the bureau in Washington.

Charts on Wyoming, Montana Formations Are Published

Publication of two new charts, one dealing with the Jurassic rocks in Central Wyoming and the other with oil-bearing formations in Northwestern Montana, was announced by the United States Geological Survey.

Investigations in Wyoming, the bureau said, indicate that undiscovered oil may occur in possible stratigraphic traps in several Jurassic formations, which are shown in the chart, entitled "Stratigraphic Sections and Thickness Maps of Jurassic Rocks in Central Wyoming." Copies may be secured at 40 cents each from the offices in Washington, Casper, Wyoming, Denver and Tulsa.

The continuity and correlations of the oil-bearing rocks of Northwestern Montana between the area of outcrop in the front ranges of the northern Rocky Mountains and the Kevin-Sunburst and Whitlash fields on the Sweetgrass arch, are shown on a chart entitled "Mississippian and Devonian stratigraphy of Northwestern Montana, copies of which are available at 30 cents each from Washington; Billings, Montana; Casper; Denver, and Tulsa.

Procedure for Immediate Tax Relief Outlined By Internal Revenue Bureau

Regulations which will permit corporations to take immediate advantage of the relief provisions of the tax legislation enacted by Congress last month were announced by the Internal Revenue Bureau August 15, for initial application against payments of the September 15 installment on 1944 tax liabilities.

Corporations with two installments on their 1944 taxes yet to pay, on September 15 and December 15, will be permitted to divide the ten percent of their excess profits tax between the two, while a special provision for corporations paying the remaining installments due on excess profits tax for a year which began prior to January 1, 1944, will permit them to take the full amount from the final installment.

All corporations which have paid the 1944 excess profits tax in full will automatically receive a refund of the 10 percent credit from the bureau.

In the case of all corporations filing excess profits tax returns hereafter, the 10 percent credit it to be taken on the return and the reduced total tax may be paid in the usual installments.

Cash for Tax Bonds

"Excess profits tax refund bonds", heretofore issued to corporations to evidence the 10 percent postwar refund due on their excess profits taxes will become redeemable in cash, at the option of the holder, on or after January 1, next. Specific procedures for presentation of the bonds for redemption will be issued in the near future by the Treasury.

In all cases where bonds are due a corporation but cannot be issued prior to next Jannary 1, the corporation will receive cash instead of bonds.

The law permits corporations who anticipate carryback refunds, due either to net operating loss or unused excess profits credit in the current year, to defer current tax payments equal to the anticipated refund, pending final determination of the refund, and a special blank, Form 1138, has been prepared for taxpayers to use in applying to their collector for such deferments. Another blank, Form 1139, has been provided for use by corporations at the end of the taxable year for applying for an expedited adjustment of refunds due to carrybacks, and a Form 1045 is provided for use by individuals having a net operating loss carryback.

War Contracts Provision

Many taxpayers with war contracts have received special permission to take amortization deductions over a five-year period on certain emergency facilities. If, before the expiration of the five years, the War Production Board has certified that the facilities are no longer needed for emeregncy purposes (or the President proclaims the end of the emergency), the regulations provide that the taxpayer may file a notice terminating the arrangement, and file an application for tentative adjustment or refund of his prior years' taxes on the basis of the shorter period of amortization.

Unless he finds material omissions or errors in the application, the commissioner will, within 90 days, determine the amount due the taxpayer, apply as much of it as necessary to outstanding taxes owed by the taxpayer, and refund the balance. Two special forms (Form 1140 for corporations and Form 1046 for individuals) have been prepared for the use of war contractors desiring such tentative adjustments.

If for any reason not covered in the regulations, a taxpayer has any tax payments coming due while an application is pending for a 90-day refund on account of a carryback or amortization allowance, he may apply to his collector for an extension of time so as to avoid making any payments which would thereafter have to be refunded to him.

PAW Cuts Back September Certifications for Texas

PAW's certification of a rate of 2,366,000 barrels daily of all petroleum liquids next month for Texas was cut back sharply August 17 following consideration of a suggestion from state authorities that output be curtailed in view of the end of hostilities. Announcement for the new certifications is expected early this week. At the same time, it was indicated that California production, booked considerably in excess of the efficient maximum under the stress of war, also would be dropped to more conservative levels.

What PAW had contemplated certifying to California for September had not been disclosed but it was expected the rate would be about the present figure of 1,012,900 barrels daily of crude and 60,900 barrels of natural gasoline and condensate.

The original Texas certification was based on continuance of histilities even though the time it was issued there were indications that the war was drawing to an end. Officials explained that the military could not afford to attempt to discount future developments and had to figure on all-out operations right up to the moment the last shot was fired and the last bomb was dropped.

The figure was revised, following receipt of the suggestion. Because of the fact PAW has already recommended that rail shipments of West Texas sour crude to the Pacific Coast be halted and the 10,000 barrels of asphalt crude brought into the certifications for the first time would not now be required. About 30,000 to 40,000 barrels daily of West Texas oil was stopped with the halting of the rail movement.

The Texas Railroad Commission postponed its statewide hearing until August 30, when PAW's revised figures will be received. The original certification of 2,366,000 barrels brought a protest from commissioners who asked PAW for a reduction, 200,000 barrels daily being the cut suggested by Commissioner Ernest O. Thompson.

If East Texas is allowed to produce only 22 days, 90,000 barrels of the 200,000 could come from that area. Thirty to 40,000 barrels daily cut in West Texas areas is looked for. Reduction in other fields producing above their maximum efficient rates will probably account for the remainder of any reduction ordered.

The commission reported that during July the average pressure in the East Texas field dropped .82 pounds to 1002.97 pounds. During July, oil production averaged 384,810 barrels daily, and water injection averaged 382,119 barrels per day.

A representative of East Texas Oil Association, asked that the allowable for that field be reduced to 20 days production during September.

As now set up, oil subsidies may run to June 30, next, but no termination date has ever been suggested, either in the original directive establishing the payments or in any subsequent order. It is expected they will continue as long as oil price ceilings.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED August 18	August 11
Alabama	950	950
Arkansas	80,100	80,050
California	935,200	948,200
Colorado	12,150	12,100
Florida	200	200
Illinois	203,700	203,800
Indiana	13,450	13,450
Kansas	275,000	268,250
Kentucky	29,500	29,550
Louisiana	366,200	366,200
North	70,500	70,500
South	295,700	295,700
Michigan	48,350	48,500
Mississippi	55,100	52,850
Missouri	100	100
Montana	22,000	21,905
Nebraska	850	850
New Mexico	103,700	103,700
New York	13,700	13,900
Ohio	6,450	6,500
Oklahoma	391,000	391,000
Pennsylvania	37,100	37,050
Tennessee	35	35
Texas	2,222,700	2,222,700
Upper Gulf Coast	567,650	567,650
East Texas Field	380,950	380,950
Rest of Eastern Texas	145,600	145,600
Lower Gulf Coast	255,650	255,650
Southwest Texas	83,850	83,850
South Central Texas	21,600	21,600
West Texas	526,600	526,600
North Texas	152,800	152,800
Panhandle	88,000	88,000
West Virginia	8,200	8,250
Wyoming	112,100	112,050
Total United States	4,937,835	4,942,140

World-Wide Monopoly Charge Lodged Against Electric Precipitation Firms

Charging a virtual world-wide monopoly in the precipitation business, the Department of Justice filed a civil action in the Federal District Court for the Southern District of California August 14 against three American and five foreign companies for violations of the Sherman anti-trust act.

Named as defendants were International Precipitation Company, Los Angeles; Western Precipitation Corporation, Los Angeles; Research Corporation, New York, and Walter A. Schmidt, Glendale, California, president of both Western and International and manager of Western. Howard A. Poillon, former president and manager of Research who retired because of illness in the fall of 1944; Lodge-Cottrett, Ltd., Birmingham, England; Siemans-Schuckert Werke, A.G., Berlin; Siemens-Lurgi-Cottrell-Elektrofilter-Gesellschaft, m.b.H. fur Forschung and Patentverwertung, Berling; Metallgesellschaft, A.G., Frankfurt-am-Main, Germany, and Precipitation Company of Canada, Ltd., Montreal, were named as co-conspirators.

The complaint sets forth that the defendants are designers, manufacturers and installers of electrical precipitation gas-cleaning units which remove suspended particles from gasses by passing them through an electrical field, and that these units have been used at some point in this war in the production of most of our important war materials, including high-octane gasoline and synthetic rubber.

It is charged that the defendants and co-conspirators are now continuing practices begun before 1930 which illegally restrain and monopolize interstate and foreign trade in electrical precipitation units, from the designing to the final selling, and asserts that, through continuing agreements, the five co-conspirator companies have engaged in no business in the United States and, conversely, the three defendant companies have agreed to refrain from all business outside the Western Hemisphere and United States possessions.

It is charged, also, the United States has been divided for selling purposes between the three defendants in various ways, and that the defendants, by their control of patents and technical information, are depriving other manufacturers of their use and that prices have been maintained at high non-competitive levels and the development of standardized, low-priced equipment has been retarded.

Based on Cottrell Patents

The complaint asks that the defendants be perpetually enjoined from continuing any of the numerous practices charged to be illegal, that the three companies be required to grant to each other and to any other applicant royalty-free licenses for patents deemed to have been used illegally and that the defendants be ordered to furnish technical information in their possession to interested parties.

The alleged monopoly is based upon the so-called Cottrell patents obtained in 1907 in the electrical precipitation process.

Detailed Maps Available Of Southeastern Kansas

Topographical maps of the Cherokee, Pittsburg and McCune quadrangles of Southeastern Kansas have been completed by the U. S. Geological Survey in cooperation with the Kansas Geological Survey and are now available to oil men and others. The three maps cover an area extending 34 miles west from the state line and 17 miles north-south in Crawford, Cherokee, Labette and Neosho counties.

The new topographic maps are highly detailed, on a scale of approximately one mile to the inch and show all roads, railroads, rural houses, cities, and sea-level elevations of bench marks and road intersections. They constitute the first of a group of maps of Southeastern Kansas being made cooperatively by both geological surveys.

Similar maps are being made to cover the remainder of Cherokee, Crawford, Labette and Neosho counties and parts of Allen and Bourbon counties. Copies of completed maps may be had from the State Geological Survey, University of Kansas, Lawrence, or from the U. S. Geological Survey at Washington, D. C., for 10 cents each.

Early Rubber Crop

Within three months after the freeing of the entire East Indies territory, rubber plantations there may be able to supply about one-half of the world's crude rubber demand. It was reported recently by *The Wall Street Journal* that Dr. Hubertus Van Mook, governor of the Dutch Indies, says that rubber will be available almost immediately after the Japanese cease resistance in rubber-producing areas. The rubber trees have not been damaged, according to the report, and yields will likely be high since there has been no tapping for three years.

Offices Moved

Devonian Oil Company has recently established the main office of its land and geological department in Fort Worth, Texas, with R. R. Perterfield as manager. He was formerly stationed in Midland, Texas. J. S. Miller assistant manager, and Donald L. Norling, geologist, were formerly located in Tulsa.

Views on Transportation Asked by Lea Committee

Individuals interested in the transportation investigation by the House Interstate and Foreign Commerce Committee were invited last week by Chairman Clarence F. Lea to submit statements of their views by November 15, in anticipation of hearings which will open shortly thereafter.

Explaining that the purpose of the committee is to develop a "limited number of legislative proposals which seem to be of substantial value for improving the present transportation situation," Lea released an outline of topics on which comment was invited, the major question being whether the country has a national transportation policy and where, if not, responsibility lies.

The list of topics also goes into regulation, covering the advantages and disadvantages of separate regulatory agencies for each mode of regulation; the extent, if any, to which any or all forms of common carriers should be exempt from application of the anti-trust statutes where they are under the supervision of a regulatory agency; and to what extent and under what circumstances differentials in rates are warranted or desirable as between different types of carriers.

Lea disclosed that the committee also would study common ownership and integration of common carriers of different types, taxation and other problems.

Hearings Set in West On Federal Leasing Act

Legislation streamlining the leasing laws, introduced by Senator Joseph C. O'Mahoney of Wyoming, will be the subject of hearings by a subcommittee of the Senate Public Lands Committee, opening at Casper, Wyoming, August 27, and moving on to Denver August 30.

The subcommittee will be headed by O'Mahoney, other members being Senators Hatch of New Mexico, Gurney of South Dakota, Johnson of Colorado and Robertson of Wyoming.

A bill with similar objectives was introduced in the House of Representatives by Congressman Fernandez of New Mexico. There are a number of differences between the two measures, which will be ironed out in the course of their enactment.

One of the most important differences lies in the provisions for royalty rates, the Fernandez bill requiring that all future leases on the public domain be issued at a royalty of 12½ percent, while the O'Mahoney bill makes no changes in present rates.

New Field Named

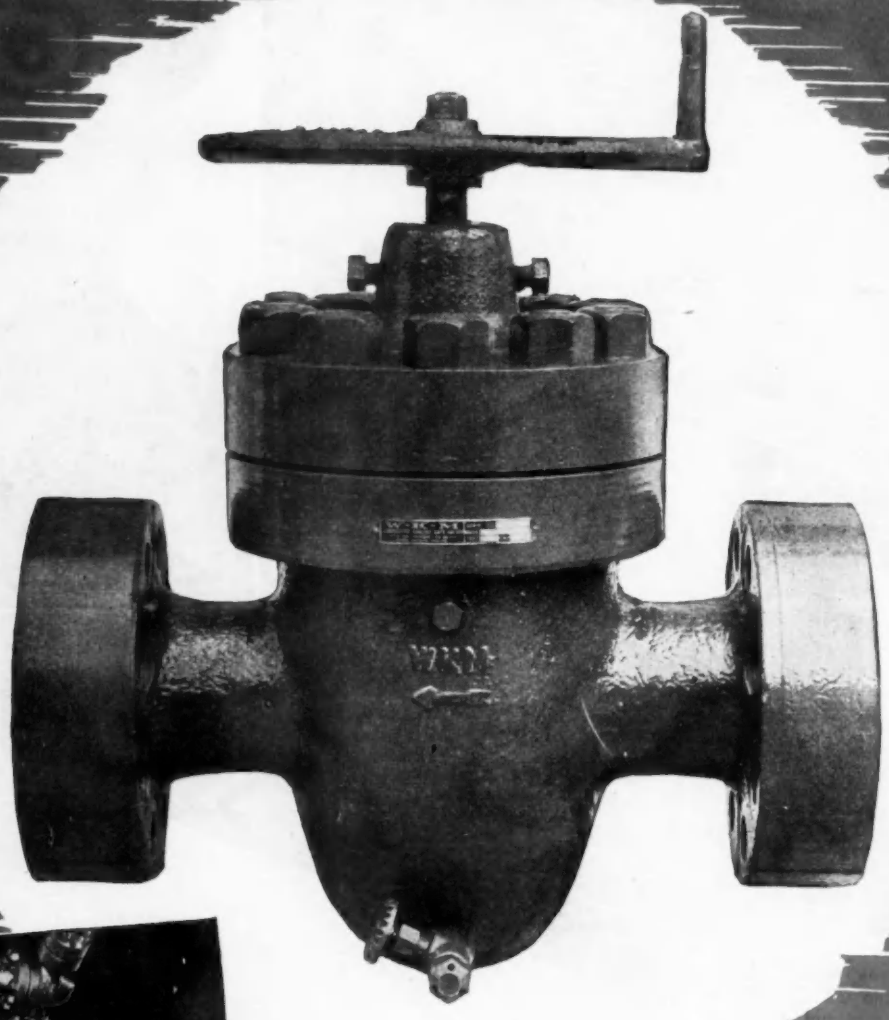
The name "Hinnant" has been given the field discovered by Wright & Christie's M. A. Hinnant 1, Ed Quinn survey, in Live Oak County, Don O. Chapell, chairman of the oil field nomenclature committee of the South Texas Geological Society, has announced.

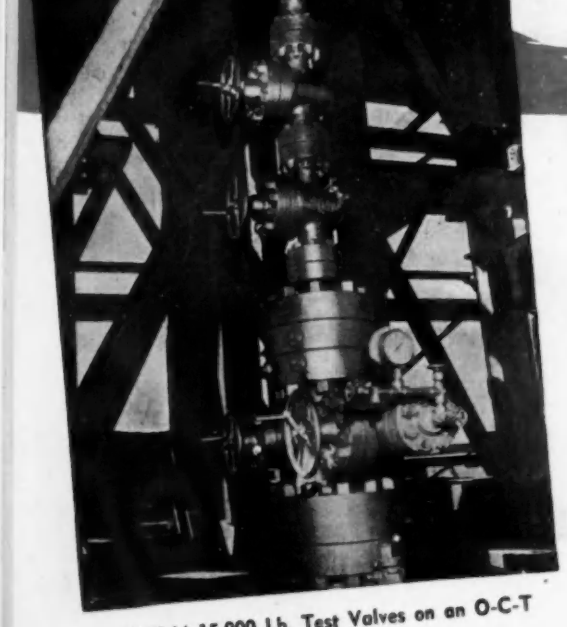
1. An aerial view of Dhahran, field headquarters of Arabian American Oil Company in the Damman oil field, principal oil source of Saudi Arabia.
2. Pall of smoke hangs over the burning Balikpapan refinery on Borneo after Allied troops invaded the Borneo east coast oil center. PAW estimates a year to two years will be required to repair the damage.
3. It is a tribute to the American petroleum industry that there should be enough gasoline to permit the lifting of rationing at home while huge stockpiles such as this were being collected in the Far East. This is a depot in the Manila area.

(Acme photo)

4. Capt. Kermit K. Beahan of Houston, former employe of Humble Oil & Refining Company, celebrated his birthday August 11 by dropping the most powerful explosive in history of warfare on the Japs. Capt. Beahan was bombardier on the plane that unloaded the atomic bomb on Nagasaki.
5. Deepest pay in the Mid-Continent area sprays derrick floor with 45-gravity oil as wet string of tubing is pulled to run permanent packer. The well is Cities Service Oil Company's Lawson 1, McClain County, Oklahoma.

W-K-M - first with 15,000 pound test VALVES





W-K-M 15,000 Lb. Test Valves on an O-C-T Christmas tree

When the industry's need for 15,000 pound test pressure Christmas tree valves became apparent, W-K-M was first to answer the call. Utilizing the time-proven features of design which have distinguished W-K-M valves in the lower pressure field, a round, smooth through-conduit opening; parallel expanding gate; oversize bronze renewable seats; truoble-free lubrication, etc. . . . the 15,000 pound test valve is performing with equal efficiency. It is manufactured to "X-ray Standards" and the body, bonnet and stem are Magnaflux (magnetic particle) inspected. All steel parts are heat-treated to provide the most favorable physical properties.

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Phillips Releases Data on Record-Breaking Well

First information on specific data concerning the drilling of the world's deepest test for oil has been released by the Phillips Petroleum Company.

The test, Phillips' Schoeps 3, E. M. Millican survey, Brazos County, Texas, was drilled to 16,655 feet, where pipe was stuck, which halted drilling. Operator now is attempting completion slightly below 12,060 feet. Following a 57-day fishing job, operator set 5½-inch casing at 12,060 feet in the Eagleford section.

The Schoeps 3 reached its record-breaking depth in 354 elapsed days after moving in. Of these 315 were operating days, with 15½ days lost to repair shut downs. Nine pilot reamers, 27 drag bits and 133 rock bits were utilized in the operation.

The Schoeps 3 set another record in penetrating 3687 feet of salt overhang with attendant mud complications. Salt water encountered between 5656 feet and 9343 feet with the section cased off at 9531 feet with 9⅝-inch casing.

Fifty-seven wire line and conventional cores as well as numerous side wall cores were taken. The company is operating its own mud field laboratory equipment and figures recently released indicate the well has used a total of 3122 tons of mud in addition to 253 tons of chemicals.

The Schoeps 1 and 2 were drilled by Phillips on the same lease in 1942 and 1943, and were dry holes of comparatively shallow depths.

Special Oil Training Given to 1000 Texans

Approximately 1000 production and pipe line men enrolled in 51 evening classes in oil field subjects during the school year of 1944-45, according to the State Director of Trade and Industrial Education, Austin, Texas.

Classes were held in Colorado City, Crane, Denver City, Iraan, Kermit, Kilgore, McCamey, Midland, Odessa, Pampa, Sundown, Tyler, Wichita Falls, Wickett, and Wink.

Courses include pipe line construction and maintenance, pipe line operation, geology of the Permian Basin, theory of pressure maintenance, oil and gas reservoirs, mathematics of oil production, gas measurement, manufacture of natural gasoline, planning a repressuring installation, and field production practices.

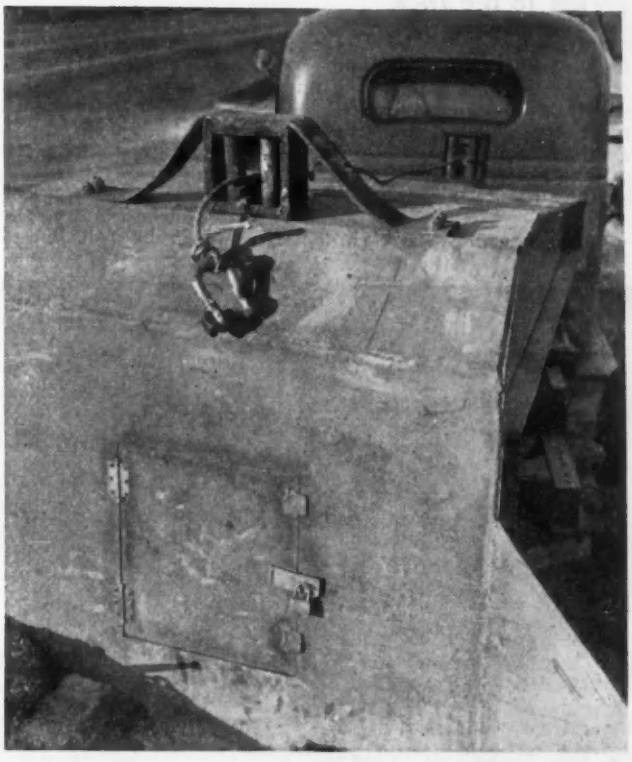
Special training in methods of gas injection and secondary recovery in the Panhandle field is being planned, classes to be conducted in Pampa.

Safety Official Retires

Clyde W. Smith, manager of the safety department of Standard Oil Company of Indiana, has retired because of ill health. Smith served as vice president and a member of the executive committee of the National Safety Council and was formerly chairman of the American Society of Safety Engineers as well as being active in the safety program of the American Petroleum Institute. He established the first safety department in the petroleum industry at Standard's Whiting, Indiana, refinery in 1918.

Roller Line Guides

Speed Low-Bed Trailer Loading



CONTRIBUTING much to the speed and efficiency with which tractors, graders and similar heavy equipment may be loaded and transported, the loading method devised by one contractor is both inexpensive to install and easy to operate.

The low-bed heavy trailer, overslung and pivoted to a post behind the cab of the tractor unit, is essentially the same as other equipment-moving units, with the exception of the two shop-made line guide roller devices affixed to the top of the framework as shown in the photograph. A small winch handling ½-inch line and powered by a take-off from the truck drive shaft is mounted just to the rear of the cab. The difficulties experienced in loading the heavy units usually have centered around the problem of maneuvering it, with the aid of the winch line, in such a way as to load the unit with a minimum of see-sawing, using up time and the patience of the workmen.

These roller line guides are the greatest factor contributing to the increased efficiency of the truck and trailer. Mounted atop steel sheeting welded across the two overslung arms of the trailer, the roller units are mounted along the center line, one of them at the edge of the trailer well and the other installed at the extreme forward end nearest the winch unit. Each of the two line guides consists of a 6-inch inside diameter, square box-like steel enclosure open on two sides. The four sides are made of ¼-inch steel plate welded together. Mounted inside the enclosure are four steel 1⅝-inch rollers, two of them mounted in a vertical plane and two others set in horizontally, and all spaced to leave an opening of. 1½ to two inches through which can pass the winch cable. Axles of the rollers were turned down to 1-inch and mounted in round holes of the same diameter in the sides of the cage. The rear guide is firmly anchored by means of a piece of ⅜-inch by 4½-inch strap iron which is laid across the top of the guide and bolted to the sheeting on either side.

Much Improvement

The advantages of this type of guide are apparent when the truck and trailer unit are in the jack-knifed position similar to that shown in the photograph. Regardless of the relative positions of the winch and load, the line will always exert a straight-line pull. Since the majority of loading jobs seem to occur in narrow roadways or cramped positions, the improvement over the older system readily can be seen. The cost of building these guides in the company shop is negligible as compared to the time saved in field operations.

An improvement resulting from the paneling-over of the forward part of the trailer is the space thereby made available for storage of tools, blocks and small rigging equipment. A panel was cut out of the face of the panel and then fitted with hinges and a hasp, permitting the compartment to be padlocked while the unit is idle between jobs.

Oil Slated for West Coast To Be Diverted to Big Inch

About 12,000 barrels daily of the West Texas oil originally scheduled for tank car movement to the West Coast will be dispatched to the Longview station of the War Emergency Pipeline, Inc.'s 24-inch line. Facilities for the handling of a maximum of 25,000 barrels daily have been completed at the East Texas terminal.

This oil will be moved by tank cars from The Atlantic Pipe Line Company's rack near Midland to the same company's 50-car capacity rack at Kinsloe Switch, between Longview and Kilgore. Crude received at Kinsloe will be routed via a temporary 1½-mile, 8-inch discharge line to Atlantic's Kilgore station, then through a 16-inch to the Big Inch's Longview tank farm and station.

Tank car shipments of Permian Basin sour crude from the Midland rack to California refineries averaged 37,455 barrels daily during the week ending August 12, representing a decline for 2 consecutive weeks after reaching a peak of 43,529 barrels daily for week ending July 29.

Demand for fuel oil in the East now that ration restrictions have been lifted may result in more than 50 percent of the Big Inch's capacity being utilized for transporting 28-34-gravity Permian Basin oil. This carrier averaged 327,520 barrels daily during the week ending August 6. Withdrawals from working stocks at the Longview terminal during this period consisted of 152,655 barrels daily of East Texas field oil, 105,122 barrels daily of mixed West Texas, 56,706 barrels daily of Southwest Texas, and 13,037 barrels daily of Gulf Coast.

Kentucky-Tennessee Line Planned By Gas Company

Kentucky Natural Gas Corporation last week filed an application with the Federal Power Commission for authority to build an 18-mile, 10¾-inch pipe line from near Russellville, Kentucky, to a point near Mitchellville, Tennessee, in lieu of a 25-mile line from Russellville to Greenbriar, Tennessee, for which it originally applied.

Outlets Being Provided For Texas Coast Pools

The Texas Pipe Line Company is providing pipe line outlets for two Upper Texas Coast oil pools.

The company is laying a four-inch gathering system to connect three oil producers in the Blue Lake field, Brazoria County, with its trunk line from West Columbia to Manvel. The field was discovered early this year by Glenn H. McCarthy. The three wells have an allowable of 420 barrels daily.

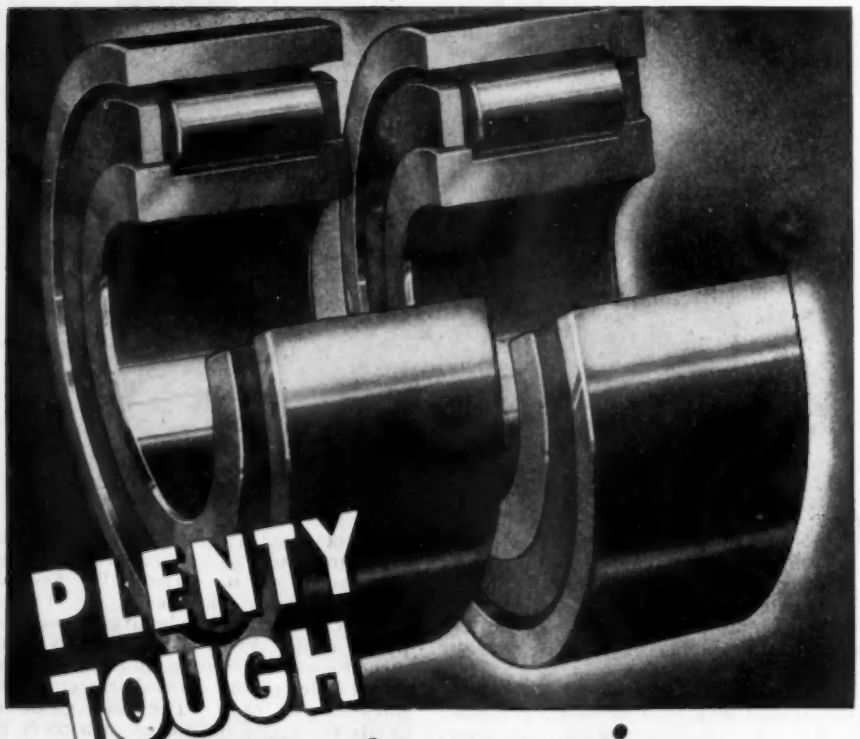
A four-inch extension is being laid from the company's Withers station to connect with the Lane City field, Wharton County. General Crude Oil Company has three producers in the Lane City field.

Permit Sought for 40-Mile Oil Line in Wyoming

With an estimated 5000 barrels of oil available at year's end from the Fourbear, Pitchfork, Half-Moon and other Wyoming fields, Husky Refining Company has applied for PAW permission to lay 40 miles of 10-inch oil line to refineries and railroad loading racks at Cody, Wyoming.

Tanks Installed

Empire Pipeline Company is installing four 55,000-barrel tanks and a 650-horsepower pumping unit at Sour Lake, Texas, receiving point for its 12-inch line to Cities Service Oil Company's refinery at Lake Charles, Louisiana. In East Texas the company is laying 4 miles of 4-inch line and a small pump station to connect with its main line to the Lake Charles refinery.



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☆ Oklahoma

Lawson Well Improves Flow; Amerada Opens Gas Field

Lawson well improves flow; new pool looms in Kingfisher County; Amerada opens new gas field southeast of Okemah; Deep Rock taps gas near Horns Corner pool; Phillips stakes 2 new locations in Airport area.

McClain County: Cities Service Oil Company et al's important new strike north of Lindsay is living up to expectations as the Lawson 1, CSW NW 22-5n-4w, deepest producer in Oklahoma from the second Wilcox sand, increased daily flow from 75 to more than 100 barrels of oil per hour before being shut in for additional storage. The well is at 10,997 feet, total depth. On a 3½-hour test through ¾-inch choke the producer flowed 370 barrels. With this good producer in the Anadarko Basin where geologists have long predicted that many major oil discoveries would be made, interest in the region is intensified.

Kingfisher County: North of Cashion in the eastern part of the county, Phillips Petroleum Company et al's Jirick 1, CSW SW 26-16n-5w, looms as a new pool opener in the Hunton lime zone. On a drill-stem test the well showed considerable oil and gas-cut mud. The well topped the Hunton at 7065 feet, drilled to 7087 feet and ran electrical log, after which a drill-stem test was made at 7000-87 feet, recovering 490 feet of clean oil with some gas-cut mud and no water in 40 minutes. Pipe was being set for production test. The wildcat is slightly east of Phillips' Hasley 1, CSE SE 28-16n-5w, which was drilled to dry Wilcox sand, plugged back and tested for ½ million cubic feet of gas in the Bartlesville zone at 6590-6606 feet and was later temporarily abandoned.

Okfuskee County: Amerada Petroleum Corporation has given this county a new gas pool at Conrad 1, SE NE NE 16-10n-10e, about 2½ miles southeast of the Okemah oil area. After drilling to 4778 feet, operator plugged back to the Cromwell sand and set casing at 3290 feet. Plug was drilled out and well deepened to 3408 feet and on initial test showed better than 10 million cubic feet of gas daily under 590 pounds casing pressure. The wildcat is on a block of 1700 acres.

Hughes County: Deep Rock Oil Corporation's Strickland 2, SW NE NE 19-7n-10e, gives the Horns Corner area another gasser from the Cromwell sand. The well was drilled to 3957 feet, total depth, and casing was perforated at 3825-37 feet, recovering an estimated 5 million cubic feet of gas daily.

Oklahoma County: Phillips was moving in for its second well in the new Airport extension to the West Edmond pool and a third location was also reported but spot was not designated. Airport 2, CSE NE 8-12n-4w, is a south offset to the well which recently gave the West Edmond area an extension of 1½ miles southwest. This well produced 380 barrels of oil in 8 hours through various sized chokes on tubing from the Bois D'Arc with pipe perforated at 7220-33 feet. Phillips has derrick for Bethany 1, CNE NW 22-12n-4w, ½ mile northwest of Classen 1, big distillate gasser which opened the Bethany area some weeks ago.

Pottawatomie County: The Texas Company's Lee 1, NE NE SW 8-10n-5e, looks like a pool opener for the area east of Shawnee, enhancing the possibilities in the region where considerable activity has been noted. The well topped Wilcox sand at 4771 feet and reported stains and odor with good porosity. A drill-stem test at 4760-75 feet recovered 160 feet of oil-cut mud in 40 minutes. Another core cut at 4775-79 feet yielded fine brown sand, slightly porous and with good odor.

Stephens County: Continuing efforts to develop a new pool southeast of the West Marlow field, Gulf Oil Corporation perforated casing with 124 shots at 7900-24 feet at Briscoe Estate 1, CSE NW 36-2n-8w, and was preparing for production test. Operator has logged a number of good sands with best possibilities for a gas-distillate producer reported at 7742-70 feet.

Cleveland Countny: O. G. Harp's Mattheson 1, NE NW NE 19-10n-2w, southeast of Moore, has been on the pump for nearly 2 weeks and reports fluctuating runs of from 90 to 140 barrels of oil daily. Production is from the Bartlesville sand zone. Late last year the well flowed 1325 barrels of oil in 24 hours and then went dead. It was drilled to dry Wilcox sand and perforated at 7570-7615 feet.

Canadian County: Ace Gutowsky, discoverer of the West Edmond pool and who recently opened a new area at Britton in central Oklahoma County, staked Hoover 1, CSE SW 14-14n-5w, wildcat on the west flank of West Edmond and 1½ miles west of production in Canadian County. The new test is 2 miles southeast of Fox & Fox Simpson 1, which had slight shows in the Bartlesville sand.

☆ Kansas

Two Ellis County Wells Become Pool Openers

Ellis County has 2 pool openers; Stanolind recovers oil on drill-stem test in Phillips County wildcat; well

Wells Completed in the United States in Week Ended August 18, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative This Year	Cumulative Last Year
Alabama									1	1	1	1	23	19
Arizona														6
Arkansas	1				1						1	4	114	150
California	28	1		2	31	1			6	6	38	55	1,394	1,277
Colorado													18	17
Florida													11	1
Georgia													6	4
Illinois	19		1	13	33		1		12	13	46	40	1,116	1,172
Indiana	4	1			5		1		4	5	10	8	219	189
Iowa											1		1	2
Kansas	16	2	1	6	25				6	6	31	33	1,034	1,123
Kentucky	9	1		5	15				3	3	18	10	329	486
Louisiana	22	1		7	30						30	16	642	470
North Louisiana	14	1		3	18						18	7	237	160
South Louisiana	8			4	12						12	9	405	310
Michigan												34	470	442
Mississippi	6			2	8		1		1	2	10	8	243	114
Missouri													30	23
Montana												5	132	215
Nebraska													3	10
New Mexico	2			5	7	1			2	2	10	9	278	259
New York	15		10		25						25	25	704	794
North Carolina												1	1	
Ohio	6	4		2	12						12	7	555	577
Oklahoma	31	4		6	41	2	1		7	8	51	46	1,495	1,137
Pennsylvania	27	9	15	1	52	1					53	48	1,864	1,868
Tennessee													2	9
Texas	73	13	5	12	103	2	1		30	31	136	153	4,600	3,814
E. Tex. Bor. Co.'s		1			1						1	1	55	79
E. Texas Field														3
Rest of E. Texas	2			1	3						3	2	136	183
North Texas	20		4	6	30	1			8	8	39	38	1,092	885
W. Central Tex.	7	1			8	1			3	3	12	19	300	255
West Texas	18				18		1		7	8	26	35	1,146	1,000
Tex. Panhandle	2	9			11						11	15	386	165
G. Coast, Upper	2	2	1	1	6				2	2	8	21	443	352
G. Coast, Lower	16			1	17				3	3	20	14	662	602
Southwest Texas	6			3	9				5	5	14	5	317	284
S. Central Texas									2	2	2	3	63	66
Utah														1
West Virginia	2	13		1	16						16	21	511	570
Wyoming												5	95	105
Total U. S.	261	49	32	62	404	7	5		72	77	488	529	15,890	14,790

* Includes distillate wells. † Includes salt water disposal wells.

west of Wichita sets pipe to test good oil show in Viola lime; maximum well registered for Kraft-Prusa field; Decatur County wildcat swabs oil from Lansing.

Ellis County: El Dorado Refining Company opened a pool 5 miles southeast of the town of Ellis, completing Kingsley 1, SE NE SE 34-13s-20w, in the Arbuckle lime zone at 3828-44 feet, pumping about 25 barrels of oil an hour. Formation was reported very porous and well saturated and the strike looks important. Six miles southeast of the Marcotte pool, Darby-Bothwell, Incorporated's Cromb 1, NE NW NW 22-11s-20w, plugged back to the Lansing, perforated at 3467-71 feet and again at 3466-69 feet and after acidizing the well filled 3100 feet with oil. Pumping unit was being installed.

Phillips County: Stanolind Oil & Gas Company set pipe at Wiltrout 1, SW SW SW 35-4s-20w, north of the Hansen pool, after recovering 200 feet of oil-cut mud on drill-stem test from the Arbuckle lime. Lansing lime was topped at 3086 feet and Arbuckle at 3384 feet. Two saturated cores were pulled from the Arbuckle.

Sedgwick County: British-American Oil Producing Company set production string at Petrie 2, NW SW SW 36-26s-1w, 2 miles west of Wichita, to test a commercial show in the Lansing lime following a successful drill-stem test. The test was made 3390-95 feet, total depth, and with tool open 30 minutes recovered 2100 feet of high-gravity oil and some salt water. The well offsets a dry hole drilled last year but is checking higher than the dry hole.

Barton County: Skelly Oil Company gave the Kraft-Prusa area a top potential well of 3000 barrels daily at Disque 4, SW NE 9-17s-11w. Production is from Arbuckle topped at 3290 feet and bottomed at 3292 feet. When plug was cracked the hole filled 2300 feet of oil in 1 hour.

☆ New Mexico

Penrose Ellenburger Strike Halts Short of Objective

Ellenburger strike in the Penrose field halted short of granite objective, and will complete through perforations; deep wildcat near Hobbs given nitro shot.

Lea County: Neville Penrose, Inc., et al's Penrose-Federal 1, indicated Ellenburger discovery for the Penrose 3700-foot field, cemented 7-inch casing at 8224 feet after logging 168 feet of barren granite-wash in drilling to 8370 feet. The Ellenburger was entered at 7950 feet, with flowing production, indicated by drill-stem test, in the upper portion of the 252-foot section. No water was encountered.

Phillips Petroleum Company's Sims 1, C NW SW 24-22s-37e, ½ mile east of the most westerly Clear Fork (Yeso) producer in the Drinkard area, and 3½ miles southeast of the Penrose Ordovician strike, is bottomed in granite at 7377 feet. It will be plugged back to try for completion in the 6800-foot Basal Clear Fork lime, as the Yeso tested nominal gas show.

Wildcats: Stanolind Oil & Gas Company's Jones 1, 3¼ miles southeast of the Hobbs field, was cleaning out after a 310-quart nitro shot at 7795-7923 feet in Basal Permian, after plugging back from granite at 10,578 feet to 7938 feet. The Texas Company's Eaves 1, 11 miles northeast of the Hobbs field, was drilling lime at 9895 feet.

☆ West Texas

Crane County Has Flowing Strike in Basal Simpson

Crane County has flowing discovery in Basal Simpson, and confirmation well for new Clear Fork area makes prolific flow; Devonian strike in Andrews County increases flow; production tests pending on 3 prospective discoveries below 11,400 feet.

Crane County: Magnolia Petroleum Company's Tucker 1-B, H&TC Ry. 25, Block 1, 2¾ miles northwest of the McKee 3-well pool and 1⅞ miles southwest of an abandoned pumping discovery, cemented 5½-inch pipe on bottom at 5817 feet after flowing at a rate of 10 to 15 barrels of oil hourly when tester was used at 5774-5801 feet in the Waddell, or Basal Simpson, sand. Failures isolate this discovery from the McKee pool, while top of the pay is about 100 feet lower than the abandoned Waddell sand discovery. Lease expirations will require immediate tests northwest by Magnolia and Standard Oil Company of California.

Gulf Oil Corporation's Henderson 2-E, PSL 25, Block B-27, and 3150 feet southwest of its small discovery in the same zone, flowed 191 barrels of 36-gravity sour crude with gas-oil ratio of 778/1 on 9¾-hour natural test through open tubing from Clear Fork (Tubb) lime at 4410-45 feet. Acid treatment will follow. The discovery tested 2 barrels of oil, 52 barrels of water and 1,040,000 feet of gas initial through ½-inch choke after plugging back from Ellenburger, and will be abandoned.

The Atlantic Refining Company's University 1-A-31, which induced the company to start 9 nearby tests to forestall 1946 lease expirations, was drilling lime and shale at 9556 feet in Simpson, topped at 9250 feet. It is maintaining its high structural position when correlated with the 10,568-foot Ellenburger failure 2 miles northeast. University 1-A-31 is rated as a good Ellenburger prospect, although it temporarily passed up about 500 feet of effective oil pay in the Devonian between 7913 and 8895 feet.

John I. Moore et al's Waddell-Southland 1 and Humble Oil & Refining Company's Cowden 1, both Ellenburger prospects that have had promising shows in the Devonian, were drilling at 6695 feet and 6810 feet, respectively.

Deep Prospects: Amerada Petroleum Corporation's Jones 1-A, Northwestern Gaines County and 4¼ miles southwest of the Yoakum County sector of the Wasson field, was to make geophysical tests after drilling out cement to 11,514 feet, with 5½-inch pipe at 11,629 feet, or 6 feet off bottom. Initial perforations will be made at 11,438-11,444 feet to test for possible water in the Devonian pay, topped at 11,181 feet. This wildcat also indicated oil production in the Wolfcamp at 9090-9196 feet.

Humble's Buchanan 1, Midland County's first prospective producer, was unloading by swabbing through tubing to test for production through perforations at 12,130-12,230 feet, with 5½-inch casing at 12,568 feet, or 6 feet off bottom. Six drill-stem tests, attempted after entering the Ellenburger at 12,170 feet, were incomplete and without shows. Gas-distillate production is anticipated near the 10,300-foot level.

Shell Oil Company and The Texas Company's Ratliff-Bedford 1, indicated 4-pay discovery for Andrews County, was being checked by engineers for effectiveness of cement used in landing 5½-inch casing at 11,468 feet, or 7 feet off bottom. More than 400 feet of broken oil pay was logged in the Ellenburger, topped at 11,018 feet, before reaching water.

Deep Failures: Phillips Petroleum Company's McDowell-McDow 1, Glasscock County, was abandoned in Ellenburger water at 10,915 feet. The company cancelled plans to retest a brief flow of oil passed up in Mid-Permian. The company's Powell-Powell 1, Pecos County wildcat and 2⅔ miles west by north of the Fort Stockton field, was abandoned at 12,127 feet in shale, possibly Pennsylvanian. It is on the east edge of the Delaware Basin.

Andrews County: Magnolia Petroleum Company and Humble's Cowden 1, previously indicated discovery, flowed 65 barrels oil in 5 hours through open tubing, then swabbed and flowed 160 barrels oil in 21 hours. Production is from perforations at 7900-60 feet in Devonian, topped at 7778 feet. Acid treatment will follow, then perforations will be made higher and opposite the most effective pay.

Cochran County: Texas Gulf Producing Company's Slaughter 1, League 113, Potter County School Lands, and 3 miles west by north of the Dean pool, was credited with filling 2000 feet with oil in drilling to 5062 feet in San Andres, topped at 4180 feet.

Pecos County: R. M. Payne et al's McLain 1, C W¼ of N¼ H&TC Ry. 7, Block 2, confirmed favorable structural position in testing a show of gas at 3180-3249 feet, and resumed drilling to explore the Ellenburger.

☆ Texas Panhandle

Dallam Test Has Possible Porosity in Ellenburger

The Texas Company's Capitol Freehold Land Trust 1, C SE SE Capitol Syndicate 10, Block 7, Western Dallam County wildcat, was changing to cable tools after cementing 5-inch pipe at 6167 feet, with the hole bottomed at 6169 feet in granite, topped at 6162 feet. Electrical logging survey revealed possible porosity in the Ellenburger near the 5800-foot level. The company's large supporting block extends into Union County, New Mexico.

Sinclair Prairie Oil Company's Henderson 1, C NW NW H&GN Ry. 16, Block A-8, Wheeler County Ellenburger prospect, entered the granite-wash at 2849 feet with elevation of 2272 feet, and was drilling granite-wash and lime at 3370 feet.

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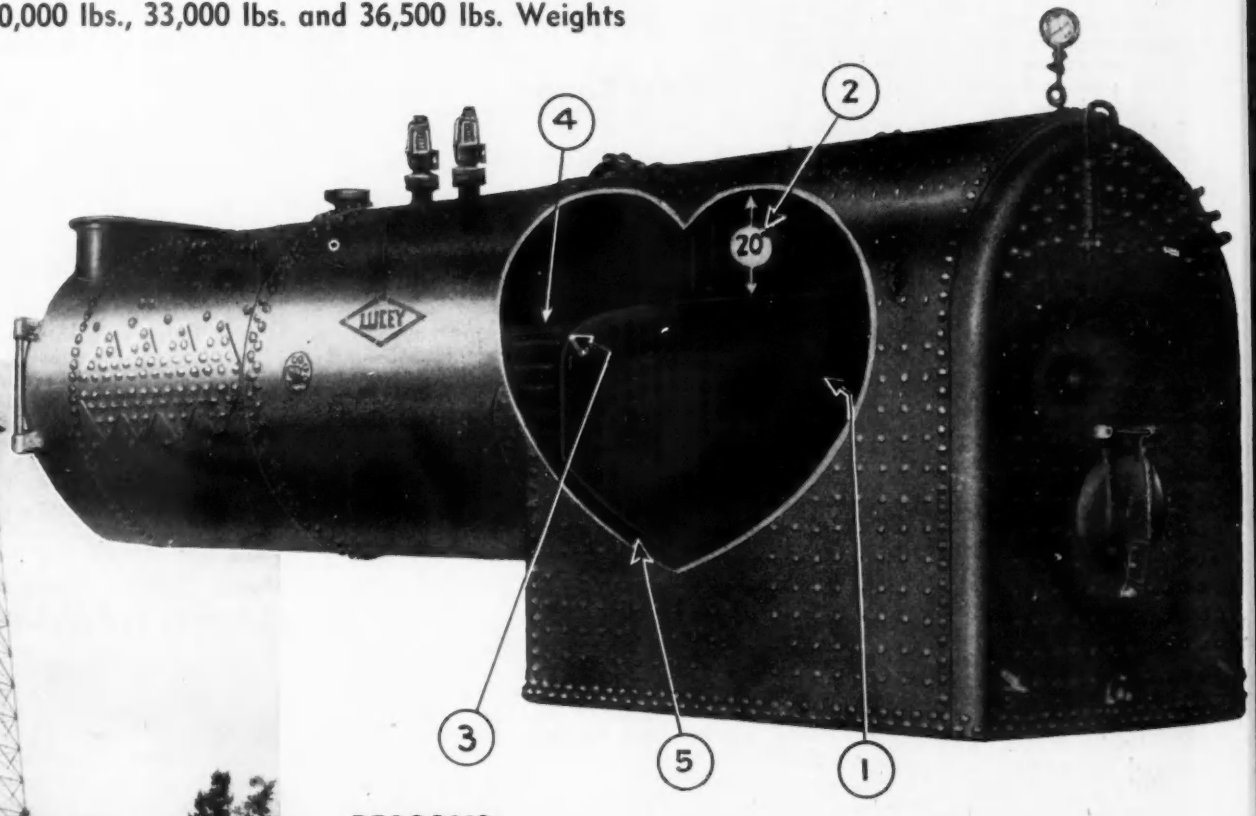

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☆ West Central Texas

Shallow Production Seen For Runnels County Offset

Shallow production is promised for Runnels County discovery offset; upper pay makes flow in Cooper area, Jones County; merger of the Wimberly and Reddin fields assured.

Runnels County: O. P. Leonard et al's Thompson 1, C SW SW E. T. Ry. 709 and ¼ mile east of a 3000-foot discovery for the Leonard pool, was setting pipe to test oil-saturated sand at 2412-15 feet. Bailing test indicated a probable commercial pumper.

Jones County: S. B. Roberts and Hunter's Cooper 2, north offset to their recent Swastika lime discovery for the Cooper pool, made a steady flow on preliminary test after acidizing Flippen lime perforations at 1995-2000 feet, with 7-inch pipe on bottom at 2337 feet.

Consolidation of the Wimberly and Reddin fields, both multi-pay areas, became assured by the completion of the new Idria Quicksilver Mining Company's Kelso 1-B and Jones 1 in the 2500-foot and 2300-foot lime, respectively.

Stephens County: Sinclair Prairie Oil Company's Ackers 1, J. M. Evans survey and 3½ miles northeast of Breckenridge, was drilling at 4020 feet, having tested a show of oil and water in the Marble Falls at 3718-31 feet.

☆ North Texas

Jack County Discoveries Are Put on Production

Two Jack County discoveries are on production; indicated strike in Cooke County will make pumper; deeper oil zone given Sivells Bend field.

Jack County: Hanlon & Buchanan, Inc.'s Mathis 1, G. W. Davis survey A-187 and 1½ miles southwest of the Matlock 3-well Mississippian area, flowed 318 barrels of oil and 35 barrels of drilling fluid on 20-hour natural test through 1-inch choke. Production is from conglomerate at 4758-70 feet in Bend, topped at 4362 feet, or 6 feet low to a 5759-foot Ellenburger failure ¾ mile east. Previous deep strikes in the area have proved small and erratic.

Roeser-Pendleton, Inc. and F. Kirk Johnson's McAnally 1, northeast edge of Joplin and 2¼ miles west of the Risch pool, flowed 127 barrels of 41-gravity oil natural, with gas-oil ratio of 1914/1, on 11¾-hour gauge through ¾-inch from conglomerate at 4430-50 feet in Bend, topped at 4405 feet.

Hanlon & Buchanan, Inc.'s Whitsett 1, Lot 22, BBB&C Ry. Sect. 2, A-1475, 2⅛ miles northeast of the Hosefle pool and 300 feet lower structurally, set 7-inch casing at 5173 feet to test oil saturation logged at 5171-81 feet in Bend, topped at 5115 feet.

Cooke County: Fred Snuggs et al's Almon-Sun 1, J. M. Randolph survey A-868, and 2½ miles east by north of Gainesville, filled 800 feet with oil in 7 hours after drilling plugs from 7-inch casing at 2898 feet to 2907 feet. A commercial pumper is assured. This strike is 2 miles north of the Anderson-Kerr pool. Two offsets are starting.

Magnolia Petroleum Company's Dillard 1, northwest offset to the Sivells Bend field discovery in Strawn sand at 6755-63 feet, missed the 2 producing zones but uncovered a deeper sand at 7400-15 feet. Pipe was cemented at 7391 feet after a drill-stem test yielded gas to surface within 8 minutes, and the recovery consisted of 720 feet of oil. The field has 5 producers and a failure, which may be deepened to the lower sand.

Deep Wildcats: The Texas Company's F. & M. Trust 1, Childress County, resumed drilling to establish the main water table after testing 220 feet of brackish rotary fluid from Ellenburger at 7535-80 feet. In Foard County, Humble Oil & Refining Company's Halsell 1, 10 miles southwest of Thalia, was drilling lime and shale at 5860 feet, having tested dry in porous lime at 5260-67 feet.

☆ East Texas

Harrison County Test Has Gas Flow of 15 Million Feet

Harrison County test flows 15 million cubic feet of gas on test; promising Marion County prospect testing; Shelby County test gets gas showing.

Harrison County: Rogers Lacy's Mrs. E. L. Poteet 1, Betty Humphries survey, is reported to have flowed an estimated 15 million cubic feet of gas and some distillate from perforations opposite the Travis Peak, which was topped at 7358 feet. The test was made with ¼-inch chokes on tubing under 350 pounds pressure. Total depth of the new producer is 7500 feet.

Lacy is planning another test at J. R. Tutle 1, J. M. Clifton survey, prospective pool opener, north of Marshall. All perforations have been squeezed and final attempts to complete in the Pettit horizon will be made.

Lacy's Quinn 1, Vashti Gibbs survey, is drilling below 5611 feet.

Stanolind Oil & Gas Company took out permit for Cole 1, wildcat on a 56-acre tract in the Charles Taylor survey, as a scheduled deep test 9 miles south of Marshall. Contract depth is 8500 feet, but the well may be carried deeper.

Marion County: Jefferson Oil & Gas Company's J. N. Deware 1, R. Bennington survey, perforated at 6650-60 feet with 35 shots for a drill-stem test. After cleaning for 37 hours, a good blow of gas and some distillate was obtained, with tubing pressure of 275 pounds and shut in pressure of 1825 pounds. Operators are still testing.

Shelby County: J. E. Benedum's Pickering Lumber Company 1, W. J. Brittain survey, recorded a slight show of gas at 5773-81 feet in the Upper Rodessa and a slight show of oil and gas at 5781-5824 feet. Operators cored to 7032 feet and are reaming to drill ahead.

Humble Oil & Refining Company's Pickering Lumber Company 1, St. Francois survey, is drilling below 9949 feet still in the Cotton Valley.

San Augustine County: M. E. Davis' C. Thomas 1, B. Horn survey, is drilling below 8686 feet in sandy lime. Cores from 8767-92 feet revealed no showings.

☆ South Central Texas

Imogene Test Is Completed; Charlotte Has New Test

Humble completes Imogene field well; wildcats active in Kerr and Bastrop counties; new test staked in Charlotte field.

Atascosa County: Humble Oil & Refining Company has completed H. H. Coward 7, Imogene field, for 201 barrels of 39.3-gravity oil daily through a 3/16-inch choke from perforations at 7647-50 feet. Tubing pressure was 1975 pounds.

In the Charlotte field, Humble spotted H. H. McCauley 1, G. Martinez survey.

Bastrop County: Continental Oil Company's Willie Malina 1, wildcat test 4½ miles north of Cistern, was reported drilling below 5500 feet in shale.

Kerr County: The Ohio Oil Company's Charles O. Robinson 1, wildcat in the southeast part of the county, is drilling in shale below 4100 feet. Phillips Petroleum Company's Whitworth 1, wildcat 30 miles southwest of Kerrville, is drilling near 6500 feet.

Rogers Lacy to Construct Refinery in Mississippi

Rogers Lacy, Texas oil operator, will build a refinery in the Heidelberg area of Mississippi. Late last year Lacy said he intended to build a refinery within the near future, but there was a delay in securing priorities. That hurdle has been cleared and work will start immediately.

☆ Southwest Texas

Duval County Agua Prieta Field Has Two New Oilers

Wildcat activity spurts; 2 oilers completed in Agua Prieta field; McMullen, Webb and Duval counties get wildcat locations.

Duval County: Two new oilers have been completed in the Agua Prieta field by Taylor Refining Company. E. A. Parr 6-A flowed 50 barrels of 46.6-gravity oil daily from perforations at 4967-73 feet. Tubing pressure was 285 pounds and casing pressure 960 pounds. E. A. Parr 4-C gauged 55 barrels of oil daily from 4051-58 feet.

In the Southland field, Hiawatha Oil & Gas Company's Southland Life Insurance•Company 37 flowed 107 barrels of 41.7-gravity oil daily through a 5/32-inch choke from 3965-70 feet.

Cox & Hamon staked a 3200-foot wildcat 13 miles west of Benavides. It is Clara Driscoll 4, Santa Rosalia Grant.

McMullen County: Midstates Oil Corporation will drill Nueces Land and Livestock Company 1 in the Jacob Matossy survey, wildcat 10 miles west of the Loma Alta field.

Webb County: Humble Oil & Refining Company has located a 7300-foot wildcat 18 miles east of Encinal. It is the Mary Kate Withers 2 in the Jesus Juarez survey, 1300 feet southwest of the Withers 1.

Humble also has entered the recently

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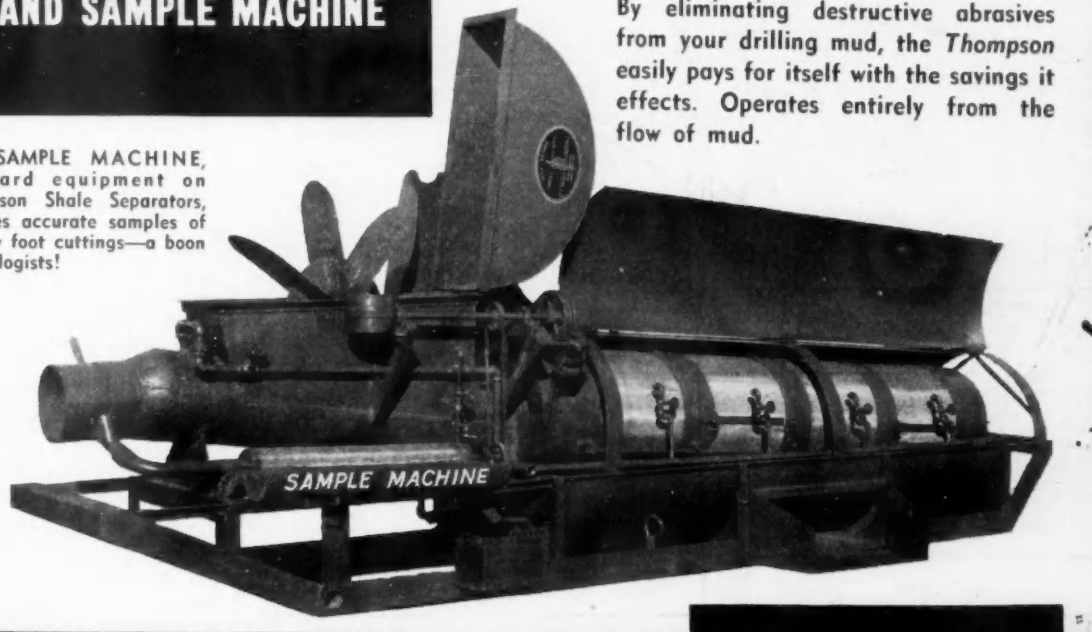

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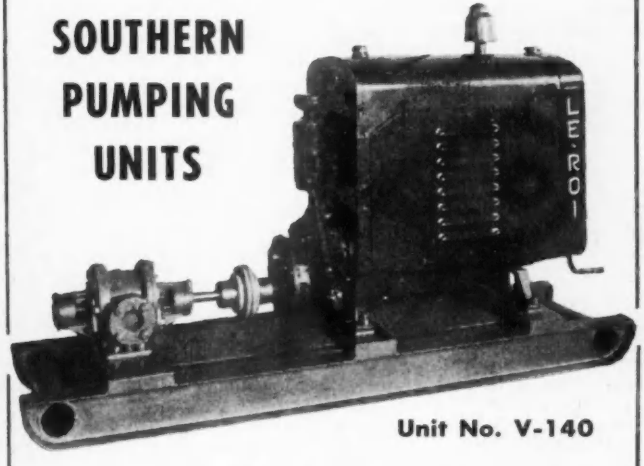

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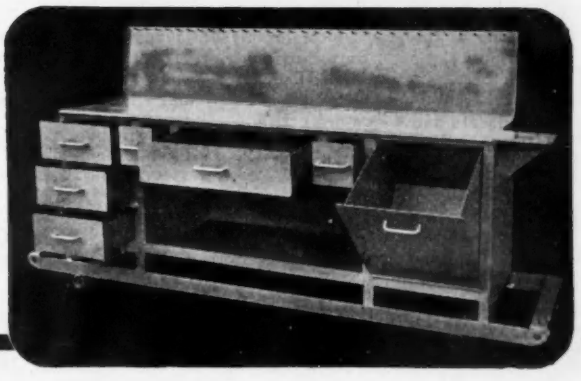

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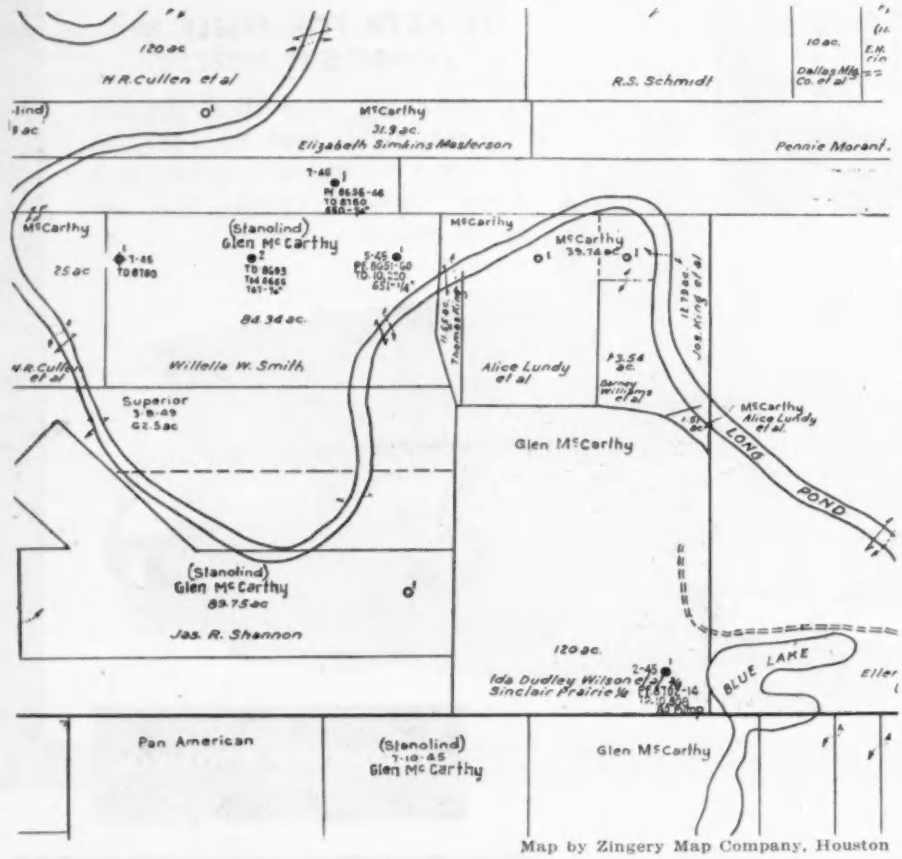
Blue Lake Pool Has Rapid Development



Map by Zingery Map Company, Houston

One of the year's most rapidly developed oil discoveries on the Upper Texas Gulf Coast is the Blue Lake pool, Brazoria County. The pool was opened in February with completion of Glenn H. McCarthy's Ida Wilson et al 1 as a pumper from 8702-14 feet. The second well was completed about ¾ mile northwest as a flowing well from sand topped at 8651 feet. The field now has 4 producers and 4 rigs are active.

opened Staggs field by staking Juan Vela Cuellar 1 north of Bruni.

Starr County: Arkansas Fuel Oil Company has completed F. F. Martinez 13, North Rincon field, for 82 barrels of 44.5-gravity oil daily from 4534-40 feet.

In the Garcia field, Sun Oil Company spotted M. M. Garcia 3-L in Porciones 93, 94, and 95.

☆ Lower Texas Coast

Oil Show Is Reported in Goliad County Wildcat

Show of oil is reported in Goliad County wildcat; final potential taken on Live Oak County discovery well; Salt Dome to drill wildcat in San Antonio Bay; Karnes County test is failure.

Goliad County: Testing operations are to get under way soon at W. C. McBride, Inc. August Kenne 1, wildcat 6 miles west of Weesache, J. W. Bergen survey. After coring a gas sand at 7711-18 feet, the test is credited with logging porous sand with some oil saturation at 7718-24 feet. A drill-stem test recovered 60 feet of oil with 650 pounds working pressure and some salt water in 15 minutes. Operator has set casing for a completion attempt.

One of the deepest tests active in this area is Sun Oil Company's G. C. Floerke 1, West Goliad area, which is coring below 11,275 feet in sandy shale.

Live Oak County: Final potential gauge has been announced on Roxy Wright and H. Merlyn Christie's Mrs. M. A. Hinnant 1, wildcat discovery 19 miles southeast of George West, Ed Quinn survey. In 24 hours the well flowed 78.30 barrels of oil through a 7/64-inch choke, no water, from perforations at 5772-80 feet. Tubing pressure was 1100 pounds and casing pressure 1950 pounds. Total depth was 6518 feet with 5-inch casing set at 6500 feet.

Calhoun County: Salt Dome Oil Corporation has located a 7500-foot wildcat test in San Antonio Bay, 10 miles southeast of Seadrift. The test is the State 1-176.

Jim Wells County: Transwestern Oil Company has completed its Seeligson Estate 10-B in the Selligson field, for 119 barrels of 39.8-gravity oil daily through a ⅛-inch choke from perforations at 6125-32 feet. Gas-oil ratio was 721/1.

San Patricio County: A 5000-foot wildcat test has been staked by the La Gloria Corporation 5 miles north of Mathis. It is the W. S. Jennings 1 in the John P. Borden survey. This location is about 1 mile west of Arkansas Fuel Oil Company's Henry Kellerman 1 dry hole.

Karnes County: Southern Minerals Corporation is preparing to drill a 6250-foot wildcat test 4½ miles northeast of Gillett. It the W. D. & O. L. Cochran 1 in the D. B. McConnell survey.

Gulfshore Oil Company's A. J. Kolodzie 1, wildcat in the Falls City sector, has been abandoned at 6075 feet.

☆ Upper Texas Coast

Testing at Cedar Bayou Wildcat Well Continues

Cedar Bayou wildcat well continues to test; north flank test at Boling sets casing; extension well seen in Hamman field; Chesterville unitization plan is set-up; Walker County wildcat location staked.

Chambers County: Testing is being continued at Butcher-Arthur, Incorporated's First National Bank of Goose Creek 1, wildcat in the Cedar Bayou area. Drilled to 7514 feet, operator set 5½-inch casing on bottom and first perforated at 7180-84 feet and recovered oil and salt water. After a squeeze job perforations were made slightly higher and the well was reported flowing 5 barrels of oil an hour through a ⅛-inch choke from the lower Frio. Information on the well is being withheld.

Wharton County: Union Oil Company of California's Hawes 1, John Huff League, on the north flank of the old Boling dome, has landed 5½-inch production string at 4645 feet with total depth of 4690 feet.

Matagorda County: On the southeast flank of the Hamman field, Union Oil Company of California is reported moving in production casing to set in its Elsie Richers 1. This test now bottoms at 10,927 feet. Present deep production in the Hamman field is from the 9100-foot sand.

Colorado County: Operators in the Chesterville field have set up a unitization plan and location has been staked for Magnolia Petroleum Company et al's Chesterville Unit 3 in the GH&H survey (on the B. F. Briggs 160-acre tract). This test is 4667 feet southwest of Unit 1, which was originally drilled as Magnolia's Anderson 1. Stanolind Oil & Gas Company's Wiese 1, second well in the field, is now known as the Unit 2 well.

The Superior Oil Company of California has staked its Matilda Tait A-3 in the recently opened Altair field. It is a northeast offset to the discovery well.

Walker County: Moran Corporation and Gar-Flo Oil Company have staked a 7000-foot test in the Henry Applewhite survey. This location is 3 miles southeast of the operators' Gabe Smither Estate 1, abandoned at 7254 feet.

Harris County: Location for a new test has been staked in the recently opened Hockley field. Magnolia spotted its Warren Ranch 3 at a point 460 feet southeast of the Warren Ranch 2 discovery well which was completed in open hole at 6356-66 feet for 204 barrels of 32.4-gravity oil daily.

Austin County: Sinclair Prairie Oil Company's W. A. Schweke 1-A, discovery well 2 miles southeast of New Ulm, tested salt water in lower perforations at 9274-82 feet. Previously, the well flowed 90 barrels of 35-gravity oil in 14 hours through a ⅜-inch choke with 100 pounds on a production gauge through the drill stem from Wilcox sand at 9155-65 feet.

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☆ South Louisiana

Final Gauge Is Made on Thornwell Field Outpost

Final gauge made on Thornwell field outpost; shows reported in Hayes wildcat; deep test located in St. Martinville Parish; South St. Gabriel discovery well is retesting.

Jeff Davis Parish: Cities Service Oil Company has made final completion on D. J. Benoit 2, 36-11s-5w, northwest extension well in the Thornwell field. Perforated at 9603-25 feet, the well flowed 10,854,000 cubic feet of gas daily through a 12/64-inch choke with a tubing pressure of 2300 pounds. The gas tested an estimated 17 barrels of condensate per million cubic feet. Total depth was 9720 feet with 5½-inch casing set at 9717 feet.

Interest is focused on Gulf Refining Company's Lacassine Company, Inc. 1-A, 19-11s-5w, wildcat in the Hayes area. This test is drilling below 11,380 feet in hard shale and is credited with picking up sand with some saturation at 10-774-784 feet.

St. Martin Parish: Location for an 11,000-foot test has been staked in the St. Martinville area by Continental Oil Company and The Kansas Corporation (Standard Oil Company of Kansas). The test is the Lake Plantation 1 in the northeast corner of 18-11s-6e.

Iberville Parish: Recompletion is being made on Noble and Baker's W. E. Caldwell 1, 52-9s-2e, discovery well for the South St. Gabriel field. Originally completed at 9191-9211 feet for 264 barrels of fluid daily through a ⅛-inch choke, 11 percent salt water, a squeeze job was made after the fluid increase of 30 percent salt water. After the squeeze job the operators will reperforate at the same level.

St. Mary Parish: Humble Oil & Refiining Company has staked a second test in the Bayou Cardin field. It is the Warren Kearney 1 et al in T16s-R8e. The Miami Corporation 1-H opened the field by flowing 264 barrels of 34.8-gravity oil daily through a 9/64-inch choke from perforations at 11,600-611 feet.

In the Charenton field, The Fifteen Oil Company has completed South Coast Corporation 8 for 215 barrels of 37.3-gravity oil daily through a 9-64-inch choke from perforations at 8644-52 feet. Tubing pressure was 1075 pounds.

Acadia Parish: Phillips Petroleum Company's Baronet 1, South Crowley field, has been completed for 307 barrels of 35.1-gravity oil daily through a 10/64-inch choke from 9812-18 feet.

St. James Parish: Humble's Louis Brady 1, 65-11s-5e, Hester area, bottoms at 10,510 feet and operator has landed 7-inch casing at 10,090 feet. Pipe is being perforated for a test.

☆ North Louisiana

Prospective Pool Openers In Two Parishes Testing

Prospective pool openers in Lincoln and Claiborne Parishes still testing; interest centers on activity in Big Creek area, Richland Parish; Lake St. John test cores 91-foot pay, thickest in field.

Richland Parish: Roy Fisher et al's W. M. Spruel 1, 4-16n-8e, 1 mile south and ¼ mile east of the discovery well of the Big Creek field, is drilling below 3215 feet without further shows. The test entered the Tuscaloosa at 2989 feet, and a core from 2993-3006 feet recovered 5½ feet of ashy sand and shale with odor and a slight oil stain. On a drill-stem test 15 and 25 feet of oil-cut mud were recovered. The well is now believed to be in the Paluxy. The well is said to be checking lower than the discovery but has a chance at commercial production.

C. H. Murphy and Sun Oil Company's offset to the producer, G. S. Parker 1, NE NW 4-16n-8e, is reported drilling below 3000 feet after having logged indications of commercial production between 2900-3000 feet.

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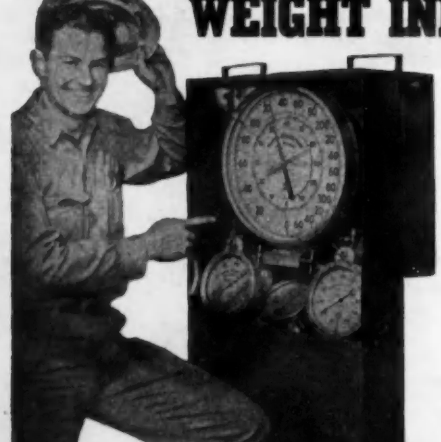

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permit for a new test in the field, R. W. Price 1, 5-16n-8e, which will go to the Tuscaloosa.

British-American Oil Producing Company has purchased an 80-acre lease in NE¼ 8-16n-8e, north of the Big Creek field, and a diagonal southwest offset to the Spruel 1, on which the company plans to begin a test soon.

H. W. Todd et al have set surface pipe at 400 feet and are waiting on cement at Greer Estate 1, wildcat in NE SW 13-16n-7e, a Paluxy sand test 3¼ miles southwest of Big Creek.

Lincoln Parish: The California Company is drilling plug out of 7-inch casing cemented at 8864 feet in M. H. Nobles 1, 12-19n-4w, prospective gas-condensate discovery in the Hico area, and is preparing to go to 10,500 feet contract depth.

The company's Norris 1, 13-18n-1w, second test in the Tremont field, is drilling by pipe lost in the hole at 9310 feet. Sufficient saturation has been logged to indicate production.

Bienville Parish: The Ohio Oil Company and Arkansas Fuel Oil Company's L. L. Brinkley 1, 6-16n-7w, second test in the Sailes field, after acidizing with 9000 gallons through perforations from 6738-6806 feet, gauged an estimated flow of 645,000 cubic feet of gas per day through 12/64-inch choke on tubing, accompanied by 24 barrels of distillate and 10 barrels of formation water. Production is from the Pettit lime. Total depth is 6871 feet.

Arkansas Fuel also brought in the third producer, Woodward-Walker 1, 32-17n-7w, recording a flow of 24 barrels of distillate and 10 barrels of water through ¼-inch choke with gas-oil ratio of 103,000/1. Testing continues.

Concordia Parish: The Carter Oil Company's Hall-Wilson 1, 29-9n-10e, cored the thickest pay sand yet found in the Lake St. John field, from 8833-8924 feet. Sand carried gas-distillate. Well is at total depth of 8966 feet waiting on cement.

Madison Parish: C. H. Murphy, Jr. and Sun Oil Company have abandoned the wildcat Joe Mahony 1, 10-17n-11e, at 4030 feet without shows.

Ouachita Parish: The California Company's Walter Maxey 1, 32-18n-1e, is drilling below 7395 feet but has reported no further shows.

Sabine Parish: Lensgraf and Pyle are deepening Long Bell Petroleum 1, formerly R. L. Gay's Long Bell Petroleum 3, C SE NE NE 5-8n-13w, an old shallow producer in the Zwolle field, from 2049 feet to new contract depth of 4700 feet in the Glen Rose horizon.

Carter will drill a stratigraphic test in Pickering Lumber Company 1, SE SW 14-4n-11w.

DeSoto Parish: H. R. Randall's Simmons-Federal Land Bank 1, C SE NE 36-15n-15w, will seek production at 5000 feet.

G. H. Vaughn, Jr.'s McGrew 1, C SW, SW 34-16n-14w, is drilling hard white sand at 8673 feet. Charles C. Lowery's wildcat Tanner 1, 13-10n-11w, is drilling at 2566 feet.

Claiborne Parish: Hunt Oil Company's W. T. Owens 1, 15-23n-7w, is still testing after reperforating from 4126-36 feet and 4140-50 feet, at total depth of 5520 feet. The test is expected to open the East Haynesville field, but has been having difficulty with salt water encroachment.

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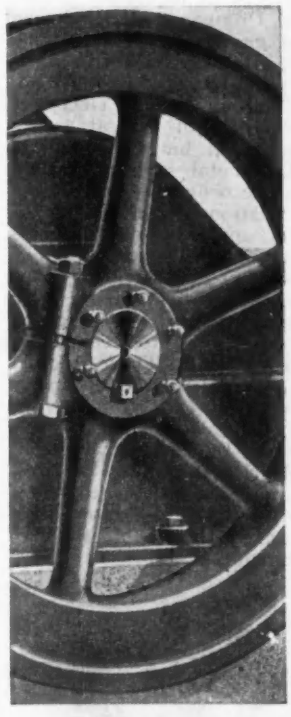

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Fig. 107 See Acme — Composite Catalog.

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☆ Arkansas

Single Wildcat Staked in Week of Little Activity

Staking of wildcat only highlight in week of little activity.

Arkansas County: C. E. Osborne's Stuttgart-Price 1, C NE SW 16-2s-3w, in the Casscoe area on the north flank of the southeast Arkansas Basin, will start work immediately. Operators predict the test will go from Upper Cretaceous formations into the Paleozoic between 3000 and 3600 feet.

Miller County: Barnsdall Oil Company has had no commercial showings in W. S. Nichols et al 1, C NE NW 20-18s-28w, and is drilling below 5278 feet. Paluxy was topped by samples at 3975 feet. Smackover production will be sought.

Sebastian County: Arkansas Oklahoma Gas Company's T. O. Blankenship 1, 2-7n-30w, is testing at total depth of 2953 feet, and has reported a showing of gas.

Vincent R. Trabucco's E. M. & Bertha Tucker 1, C N½ NW SW 36-5n-31w, is drilling below 830 feet.

White County: Lion Oil Refining Company's Nalley 1, SE NE 33-8n-7w, is drilling without shows below 4556 feet.

Columbia County: Ashland Refining Company's Bond Unit 1, S½ S½ SE 10-17s-19w, 21 producer for the Village field, gauged a flow of 288 barrels of 39-gravity oil during 24 hours from open hole in the Smackover lime at 7406-10 feet, total depth. Root Petroleum Company has made a location in the field, L. M. Dendy 1, C SW SW 14-17s-19w, 1 mile south and ¼-mile east of the new producer; McAlester Fuel Company's E. A. Threadgill Estate 1, C NW SE 10-17s-19w, will be a diagonal northwest offset.

Gas Association Sees Ample Future Supplies

The natural gas industry has a long-term supply on which to base its plans for expansion, R. H. Hargrove, vice president and general manager, United Gas Pipe Line Company and chairman of the natural gas department, American Gas Association has said in a statement.

Hargrove cited figures of E. DeGolyer which place reserves of natural gas in the United States at between 140 and 200 billion Mcf. Total sales of natural gas in 1944, as recorded by the American Gas Association, amounted to 2,189,392,000 Mcf, approximately 1½ percent of the nation's proved reserves. The industry is confident that it will continue to find additional supplies of gas, aided by new techniques in the search for oil and gas and in drilling to deeper horizons, Hargrove said. These factors have already resulted in the discovery of new reserves.

The industry has filed projects or has recently received FPC approval, for construction of nearly 5000 miles of additional natural gas pipe line in this country, capable of transmitting more than 400 million additional cubic feet a day at peak movements.

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☆ Alabama

Testing Under Way at Choctaw County Discovery

Testing continues at new oil discovery; new wildcat start offset by 2 failures.

Choctaw County: The Carter Oil Company's Sam Allman 1, SWc NE SW 5-10n-3w, has swabbed 25-35 barrels of heavy black oil on an 8-hour drill-stem test, indicative of a new oil pool 1 mile south and 3 miles east of the Gilbertown field. Testing continues. Which set of perforations in the Eutaw was tested was not revealed. Previous tests showed considerable salt water. Total depth is 3461 feet. Carter has staked an offset north of the prospective discovery, Caroline Moseley 1, C SW SE NW 5-10n-3w.

In the Gilbertown field, Hunt Oil Company's Boney 4, C SW NW 32-11n-4w, is drilling below 3200 feet with no shows indicated. Hunt's Land 5, C SE NE 31-11n-4w, the Gilbertown field, is installing pump after bottoming hole at 3651 feet.

Bullock County: T. M. McLendon abandoned as dry J. L. Harris 1, C SE SW 12-12n-22e, at 1800 feet.

Walker County: Glen D. Rose Oil & Gas Company's Ulysses 1, N½ NW SE 6-13s-6w, has been abandoned at 3450 feet with no shows.

Rose's First National Bank of Birmingham 2, NW SE 30-12s-7w, is drilling below 288 feet.

Clarke County: The California Company is rigging up rotary tools to spud in White City Plantation 1, 6-7n-1e, wildcat 2 miles south of Salitpa townsite which will seek production to the Tuscaloosa horizon. Several shallow tests have been drilled in this area without commercial production.

Wilcox County: Southern Natural Gas Company's G. W. Morgan 1, SE SE SW 32-12n-5e, is drilling below 4978 feet after running electrical log at 4601 feet. A drill-stem test in the Eutaw horizon yielded only salt water.

Florida

The Pure Oil Company's International Paper Company 1, 25-1s-11w, Calhoun County, is drilling below 350 feet.

Charlotte County: Humble Oil & Refining Company's Lownes - Treadwell 1-A, S of C SW NE 17-42s-23e, is drilling below 6344 feet in lime and shale without logging any commercial showings.

Collier County: Humble's newest Sunniland test, Gulf Coast Realties 7, C SW NE 17-48s-30e, is making hole below 8444 feet in lime and dolomite.

Highlands County: Humble's G. C. Carleton Estate 1, C SW NE 34-38s-29e, is drilling below 10,510 feet in lime and dolomite.

South Penn Oil President Given Association Post

Appointment of George J. Hanks of Bradford, Pennsylvania, president of South Penn Oil Company, as a member of the nominating committee of the Pennsylvania Grade Crude Oil Association was announced by D. T. Andrus of Bradford, president.

Hanks succeeds the late Noel Robinson of Pittsburgh.

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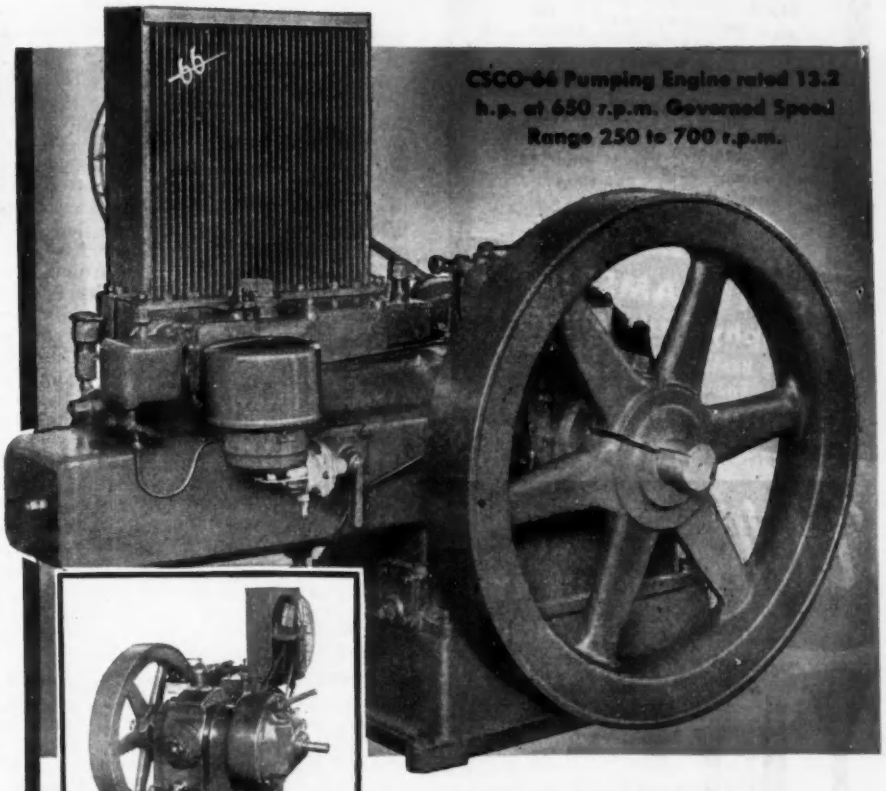

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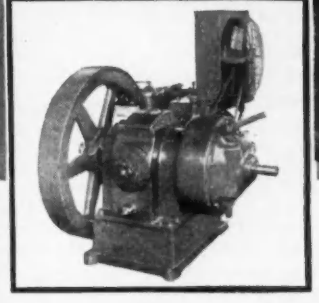

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☆ Mississippi

Fayette Wildcat May Open Jefferson County Field

New oil field indicated for Jefferson County; encouraging shows noted for Hub field prospect in Marion County; Brookhaven field well encounters fair porosity; 2 outpost tests scheduled for East Heidelberg.

Jefferson County: A new oil field is indicated at Humble Oil & Refining Company's Smith 1, wildcat in the Fayette area. After squeezing perforations at 10,930-940 feet, operator plugged back and perforated at 9730-36 feet, and the well is reported flowing 8 barrels of oil an hour through ⅛-inch choke. The gas-oil ratio is 1130/1. The fluid contains about 11 percent basic sediment and water. Operator is still testing.

Marion County: Humble Oil & Refining Company's A. E. Ball 1, NWc 20-2n-14e, appeared a probable extension of the 1-well Hub field after reporting a good show of oil sand in cores from approximately 9000 feet in the Marine Tuscaloosa section. Cores between 9005-9051 feet revealed good porosity with shows of gas, while cores at 9112-20 feet recovered porous, saturated sand. These shows have been obtained from a section about 100 feet higher than the discovery well, A. Evans 1, completed in March. Gulf Refining Company's E. H. Bradshaw 5, NEc 28-3n-17w, wildcat headed for the Tuscaloosa, is drilling below 5505 feet with no shows reported. The Texas Company's L. V. Ladner 1, SEc NE 12-1n-17w, westward extension of the Baxterville field in Lamar County, is testing the upper Tuscaloosa horizon for gas-condensate potentials prior to making a dual completion of the well. Good quantities of 16.4 gravity oil have been obtained from the Massive sand at 8756-80 feet, while the Tuscaloosa is yielding gas and condensate.

Lincoln County: Roesser & Pendleton Incorporated's W. L. Case 1, SEc 8-7n-7e, in the reactivated Brookhaven field, is coring below 10,431 feet, after turning up 5 feet of saturated sand from cores at 10,256-66 feet. Previous cores from 10,246-56 feet recovered several feet of sand with fair porosity showing good stain and odor. Subsequent drill-stem tests failed. The California Company's M. R. Douglas 1, SWc 11-6n-8e, last active prospect in the Mallalieu field finally has been abandoned in the Massive sand at 10,763 feet after failing to shut out an excessive flow of salt water.

Jasper County: Gulf's A. L. & Mrs. W. E. McIntoch 1, NEc 6-10n-10w, has been successfully completed in the West Heidelberg field with an initial production of 225 barrels of 22.6-gravity oil per day through a 12/64-inch choke. Two outpost tests are on schedule for the East Heidelberg field. Both will be approximately 2 miles northwest of the field and in the vicinity of Sinclair-Wyoming Oil Company's Bethea 1, 12-1n-12e, which is about to go on pump. One of them is Sun Oil Company's Eav Ross, SE SE 13-1n-12e, and the other is Lyons & Prentiss' J. A. Henry 1, SE 13-1n-12e. Southport Petroleum Company's C. C. McDonald 2-A, SWc SE SW 26-1n-12e, West Heidelberg, is drilling below 5215 feet with good shows of oil reported.

Adams County: Charles H. Osmond's Armstrong-Ellislie 1, NEc 31-5n-2w, wildcat, is drilling below 10,275 feet with no shows reported from the lower horizons. Shows of oil had previously been reported in cores from the Wilcox zone at 6473-83 feet but there were no indications of commercial production.

Itawamba County: Greggtex Gasoline Corporation's R. L. Burdine 1, 16-11s-9e, is shut down with hole bottomed at 1500 feet after collapse of casing. The well is reported to have had oil shows at 1195-98 feet in lime and a show of gas at 1060-82 feet.

Claiborne County: Sun's W. R. Hammett 2, 2-11n-1w, wildcat, is planning a resumption of drilling after a temporary abandonment earlier in the year due to high water. The well, which is on the Bruinsberg Dome, was highly regarded and at the time of its shut down was drilling at 3685 feet in the Wilcox horizon.

Yazoo County: A. W. Hutchings Drilling Company's L. E. Montgomery 1, NE NE SE 34-11n-1w, has been abandoned in the Massive Sand at 7604 feet with no shows reported. The Tuscaloosa zone was topped at 6820 feet and the Massive at 7505 feet. J. W. Sorrel's J. W. Ledbetter 1, 32-11n-1e, was preparing to resume drilling after being shut down for repairs at 5350 feet in chalk. No shows have been reported. Skelly Oil Company's A. Bridgeforth 1, SEc 17-12n-2e, is waiting on cement after setting casing to 814 feet. Total depth is 843 feet.

The Carter Oil Company is moving in rig for a Tuscaloosa prospect, the Allen Bridgeforth 1, NW SE 24-12n-1e. Union Producing Company's Jennie Stevens 21, NWc 12-10n-3w, deep prospect in the Tinsley field, is waiting on cement after setting plug at 11,025-11,125 feet. In a drill-stem test with packer at 10,992 feet, 6210 feet of gas-cut mud and 2990 feet of gas-cut salt water was recovered in 1 hour and 45 minutes. Electrical log has been run to 11,624 feet.

Lamar County: Sun's F. M. Snowden 2, SWc SW SE 6-1n-16w, Baxterville field, has been completed successfully with an initial flow of 612 barrels of oil in 24 hours through a ¼-inch tubing choke. Gravity of the oil is 15.8 with production from perforations opposite the Massive sand at 8725-55 feet. Gulf's Jonathan Davis 1, SEc NW SE 7-1n-16w, in Baxterville, is coring below 7880 feet after recovering good shows of gas-condensate from the Tuscaloosa horizon between 7644-7750 feet.

Superior Sells Properties In Kettleman Hills Field

Properties of The Superior Oil Company in the Kettleman Hills field have been sold to a group of operators having a substantial interest in the field. Purchasing companies include General Petroleum Corporation of California, Seaboard Oil Company of Delaware, Continental Oil Company, Shell Oil Company, Honolulu Oil Corporation and Standard Oil Company of California. Price paid was $3,600,000.

The properties consist of a quarter section of land, a natural gas plant with a capacity of 40 million cubic feet a day and other production facilities.

☆ Illinois Basin

Clay County, Illinois, Has Apparent Pool Opener

Clay County, Illinois, has apparent pool opener; Wayne County discovery tested; Coles County offsets nearing competion.

Illinois

Gulf Refining Company apparently has a pool opener 4 miles south of Iola field production at Colclasure 1, SE SW NW 12-4n-5e, Clay County. Excellent saturation was encountered in the Cypress sand at 2301-14 feet, and a show of oil was found in Aux Vases sand at 2534-38 feet. The operator was drilling on to test McClosky lime.

Wayne County: The Texas Company's Bowyer 1, SE SE NW 34-1s-5e, pool opener 3 miles southeast of the Coil pool, swabbed 234 barrels of oil natural from Aux Vases sand at 2974-81 feet after plug was drilled. Testing continues. Last week the well was erroneously reported as making more than 1000 barrels of oil.

Hamilton County: The Carter Oil Company's Provident Mutual Life Insurance Company 1, NW NW SE 14-4s-7e, a discovery 1¾ miles northeast of the Bungay pool, swabbed 93 barrels of oil in 24 hours from Aux Vases sand at 3275-3327 feet during preliminary tests. Operation was shut down for motor repairs.

Edwards County: Fred Noah and others have completed the pool opening Kershaw 1, NE NW NW 14-3w-10e, for initial pump production of 165 barrels in 24 hours from Biehl sand at 1888-98 feet.

Coles County: Howard Gordon and others' Litwiller 1, and Watson 1, east and southeast offsets, respectively, to the same operators' Brining 1, which extended the Mattoon pool nearly 2 miles southwest, are nearing completion. The Litwiller 1 swabbed and flowed 150 barrels of oil in 8 hours from Cypress and Aux Vases sand, while the Watson 1 swabbed 42 barrels of oil in 3 hours from Aux Vases at 1942-60 feet. Cypress has not been tested at Watson 1.

Kuehne Manufacturing Company's Freeman 1, NE SW NE 23-12n-7e, northwest extension test for the pool, is waiting on cement for test of Aux Vases sand at 1947-64 feet. Cypress at 1773-81 feet also will be tested.

Indiana

The Texas Company's Larkin 1, NE NE SW 16-6s-14w, ¼ mile east of the Wellborn pool in Posey County, is testing, but has not released a gauge on production. The well made 2750 feet of oil on drill-stem test.

Cabinet Change May Alter Colombian Oil Legislation

Resignation of the president and cabinet in Colombia may mean that the new bill relating to petroleum will not be presented. This will give time for further study of the situation. Private ownership is recognized in Colombia but the new bill would have greatly limited these rights, it was explained.

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This large Catalog is source of well organized buying information and related engineering data on all Harrisburg products. You will find the many diagrams, tables, illustrations of processes and products make it easy to buy.

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☆ Michigan

Three Wildcats Completed For Pool Discoveries

Three wildcats completed for oil pool discoveries of questionable importance with a fourth outpost showing oil for possible commercial production; increased drilling activity and more wildcatting noted.

Osceola County: Lupher Drilling Company's Kessinger 1, SE SE NW 5-18-10w, 3 miles north of the Reed City field, flowed 500 barrels in 17½ hours net after a 500-gallon acid treatment to Traverse oil pay logged at 2945-48 feet. Early hopes diminished when the well showed increased water-cut, up to 20 percent, after 72 hours. Pinched, it flowed 110 barrels in 23 hours on the fifth day with water ranging from nil to 6 percent. It may be deepened to the Monroe, or about 700 feet, chief producing horizon in the Reed City field. Cities Service Oil Company, The Pure Oil Company, Sun Oil Company and several independents control acreage in the area.

Allegan County: Two miles south of the South Monterey field, C. W. Cook and Spencer Cooks' jointly developed Boyer 1, SW SE SW 32-3n-13w, pumped 16 barrels in 5 hours after acid to a Traverse lime pay at 1472-75 feet. Mechanical troubles prevented a full 24-hour test but it was rated a pool discovery with 2 offsets surveyed.

Genesee County: H. H. Heinig's Elliott 1, W½ NW SE 12-9n-8e, outpost, was completed for 8 barrels of oil daily in Berea sand at 1506 feet. The test is about 5 miles east of a wildcat that produced in the Traverse 2 years ago but which was followed by several failures.

Gratiot County: Arthur E. William's Cook 1, SW SE SW 14-9n-1w, Elba Township, wildcat, logged a promising oil show in top of the Traverse lime at 2330 feet, averaging a bailer of oil per hour the first 10 hours.

Oregon Wildcats Planned

Richfield Oil Corporation has filed a number of leases for wildcatting in Columbia County, Oregon, becoming the second company to explore that area.

☆ California

Coles Levee Field Given Extension by Union Oil

Union Oil's outpost discovery extends Coles Levee field; oil disocvery in fractured Schist at Edison has operators headed for basement; second Cymric well reaches interesting stage; Helm outpost flows 672 barrels on test, extending the field nearly a mile southeast; Richfield's Bandini well may go to 15,000 feet.

Kern County: Successful completion of Union Oil Company's Kernco 34-12 in 12-31s-25e will extend the Coles Levee field ¼-mile east. On a formation test the well flowed at a rate of 1500 barrels of 31-gravity oil cutting 26 percent sand and 5 percent water. Total depth of the hole is 9976 feet, with 7-inch casing cemented at 9839 feet. Top of the oil sand is 9846 feet.

H. H. Magee, operator, who recently developed production in fractured basement Schist in the Edison field, has announced he will deepen 4 other wells to the new zone, and Monterey Exploration Company has located 3 wells and is rigging up a fourth. All of these are in Sec. 14-30s-29e with the exception of Monterey Exploration's Duff-Shell 1A, which is in Sec. 15. Magee's discovery well, Dougherty 3 in Sec. 14, came in last month flowing 1000 barrels of 19.2-gravity oil from 2589-2624 feet, with top of Schist at 2440 feet. The well was taken over by Magee from other interests and deepened to the Schist after it had proved a failure in the Upper and Lower Duff zones. A second well, Dougherty 5, has been completed by Magee. It is good for 700 barrels of 17.5-gravity oil.

Richfield Oil Corporation is testing basement Schist in DiGiorgio 3-1 in 3-31-29, Arvin-Mountain View area. On a recent formation test of the interval 5291-5340 feet (top of the Schist is 5306 feet) the well blew ½ million cubic feet of gas, and 550 feet of gassy oily mud was recovered. Operator is drilling and will make further tests.

Union's second well in the Cymric field, where Union recently discovered a new lower sand, has reached the interesting stage. Anderson 55-26 in 26-29s-21e cored Etchegoin oil sand from 3450-3483 and Miocene oil sand between 3515-3632 feet. Operator is coring for a look at the Carneros. Union's deep sand discovery well, Anderson 45-26, also in Sec. 26, was brought in last month flowing 1094 barrels of 33-

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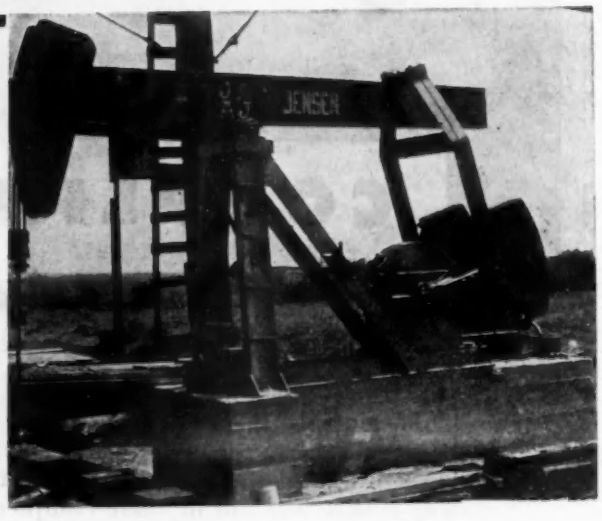

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gravity oil from Button sands just above the Carneros. Well was bottomed at 3610 feet.

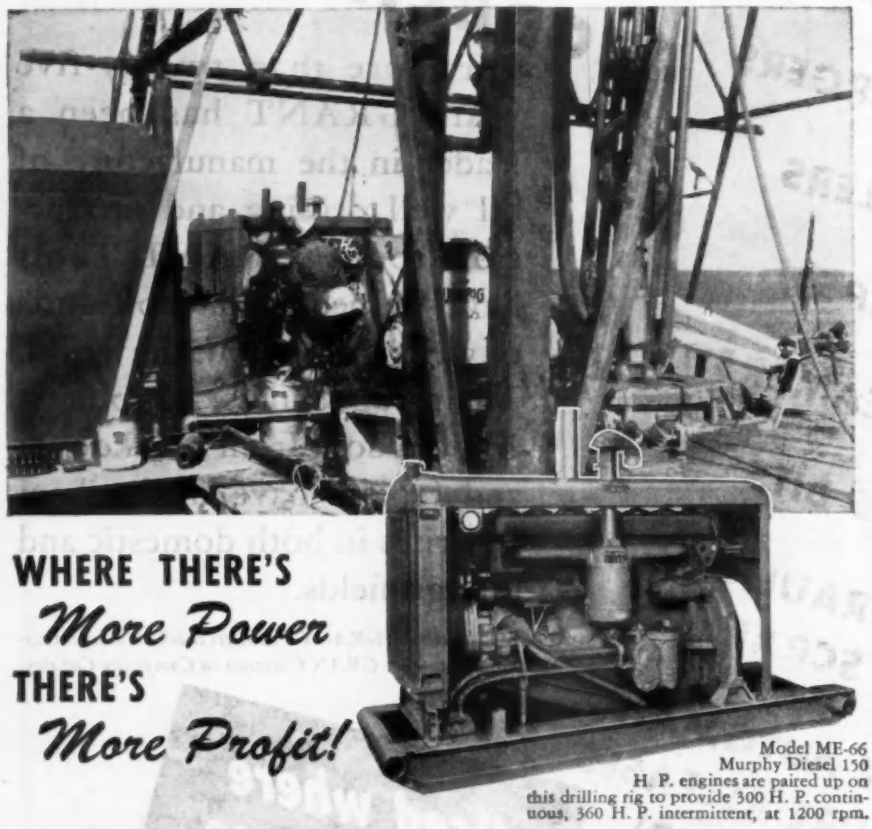
Williams Brothers Company, which discovered a small shallow field in the Antelope Hills last month, has made locations for 3 more wells. This concern also plans a wildcat on the Fitz R. Kalloch lease at Devils Den in 11-25-18.

Fresno County: General Petroleum Corporation has extended the Helm field nearly a mile southeast by an oil discovery in Witten 75-23, 23-17s-18e. On a recent formation test the well flowed 672 barrels of 32.7-gravity clean oil from a perforated interval of Miocene oil sand between 6872-6874 feet. Operator will perforated additionally before completing.

Los Angeles County: Richfield's wildcat, U.P. Unit 1 in 9-2s-12w, Bandini area, stopped the drill at 8496 feet to run an 8⅝-inch protective string. While the well is standing cemented heavy duty drilling equipment will be installed, capable of going to 15,000 feet.

There are 5 deep tests presently drilling below 12,000 feet in Southern California. Shell is drilling 2 at Signal Hill and 1 in the Dominguez field. Standard Oil Company of California is drilling 1 in the Fillmore area of Ventura County and Chanslor-Canfield Midway Oil Company 1 in the Rincon field, also in Ventura County.

Los Angeles Brewing Company is rigging up for Jones Community 1, a wildcat in the Turnbull Canyon area, 24-2s-11w. Project was taken over from Cinnabar Drilling & Exploration Company.



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☆ Canada

Standard Completes Fourth Princess Field Producer

Standard Oil Company of California has completed Princess-CPR 38-22A, NE 1sd 15 22-20-12w4, as its fourth and most easterly Devonian Dolomite producer in the Princess field.

The 38-22A topped the Dolomite at 1464 feet subsea, 7 feet higher than at 58-22A, recent success, ¼-mile west. After 7-inch casing was set in top of the Dolomite at 3943 feet, the well cored into the oil-bearing porous at 3952 feet, halted at 3968 feet, and ran a drill-stem test. A 3-hour test through 3/16-inch choke yielded 34-gravity oil at a rate of 150 barrels daily, with gas flow 680,000 cubic feet daily. Tubing has been run and well is now on experimental flow test.

Standard is moving ¼-mile east and ¾-mile southeast of the 38-22A for the next pair of extension tests.

Bata Petroleums, Ltd., Saskatchewan Independent, has successfully completed Bata 8, 1sd 5 23-39-23w3, as a dual-zone gas well with open flow potential estimated at around 10 million cubic feet daily, to boost the indicated proven area of the Vera-Unity field to about 1800 acres, making it the first important gas field in Saskatchewan.

Bata 8, 1¼ miles west of the discovery Bata 2, and 1½ miles northwest of Bata 7 (former most westerly well in the field), obtained a gas flow rate of 1 million cubic feet daily through ¼-inch choke in the Viking sand (1652-68 feet), and a further flow of 3,540,000 cubic feet daily through the same size choke in the Basal Lower Cretaceous sand (2052-80 feet). Drilling was completed at 2118 feet after topping Devonian Limestone at 2087 feet. Seven-inch casing has been set at bottom and will be perforated to open up the 2 gas sands. With rotary table elevation 1940.4 feet, the Bata 8 logged 13 feet lower in the Lower Cretaceous than Bata 7, located on the structural high. Some oil saturation was noted in the Basal Lower Cretaceous core at Bata 8, offering hope of strikes lower on the flank.

New Powder River Map

A geologic structure map of the Powder River Basin in northeastern Wyoming and the adjoining part of Montana has been completed by the United States Geological Survey, covering more than a score of fields including such well-known areas as Salt Creek, Teapot Dome and Lance Creek.

The map, compiled from all available sources, contains a large amount of heretofore unpublished data. It has been issued as Preliminary Map 33 of the Oil and Gas Investigations series and copies may be had at 50 cents each from the U. S. G. S. offices in Washington, Tulsa, Denver, Casper, Wyoming, or Billings, Montana.

Texas Field Named

The name "Santa Maria" has been given the field discovered by La Gloria Corporation's South Mercedes Unit 1, Capisallo District, Hidalgo County, Lower Texas Coast.

EXPLORATORY COMPLETIONS

ALABAMA WILDCAT

Walker County—Failure: Glen D. Rose O&G Co.'s Ulysees 1, nw se 6-13s-6w, abnd 3450 ft.

CALIFORNIA WILDCATS

Imperial County—Failure: Texas Co.'s Grupe-Engrebretson 1, 18-16s-16e, Holtville area, abnd 12,313 ft.

Tulare County—Failure: Jergins Oil Co.'s Cal. Grape 18-17, 17-32s-26e, Pixley area, Pyramid Hills 3906 ft, Vedder 4110 ft, Famosa 4510 ft, Schist 4621 ft, abnd 4634 ft.

Kern County—Failures: J. H. Maurer and A. C. Fisher's Jean 2, 15-26s-28e, No. Mt. Poso area, Vedder 830 ft, Schist 1050 ft, abnd 1098 ft.

Richfield Oil Corp.'s Tejon A 25-7, 7-10n-19w, Wheeler Ridge area, Santa Margarita 3470 ft, abnd gray sd 3552 ft.

San Luis Obispo County—Failure: Richfield Oil Corp.'s Temblor Hills Unit 1-1, 36-31s-21e, West Midway area, abnd 9360 ft.

Ventura County—Failure: Texas Co.'s Kern West 42-13, 13-4n-18w, Del Valle area, abnd 7108 ft.

ILLINOIS WILDCATS

Bond County—Failure: H. M. Miller's Guy 1, ne ne se 19-5n-4w, abnd 874 ft.

Clinton County—Failure: Texas Co.'s Schaefer 1-c, sw nw sw 26-3n-2w, abnd 1498 ft.

Crawford County—Failure: W. H. Wright's Scofield 1, nw nw ne 9-6n-13w, abnd 3051 ft.

Effingham County—Failure: H. L. Cullett's Counts 1, se sw ne 30-6n-7e, abnd 2923 ft.

Fayette County—Failure: Dale Hopkins' Myers 1, se se sw 25-8n-3e, abnd 1811 ft.

Franklin County—Failures: Skelly's Merkel 1, ne nw se 3-5s-1e, abnd 2952 ft.

Bell et al's Zeigler Coal Co. 5, nw nw nw 25-7s-1e, abnd 2853 ft.

Gallatin County—Oil Discovery: Frank King, Jr.'s Jones 1, ne ne ne 22-7s-9e, Av 2899 ft, pump 200 bbls, td 2913 ft.

Jasper County—Failure: Pure's Sacred Heart 1, sw ne sw 33-7n-10e, abnd 2831 ft.

Jefferson County—Failure: Cherry & Kidd's Carson 1, ne ne sw 31-3s-3e, abnd 2945 ft.

Marion County—Failure: Buell & Doran's Sloan 1, nw nw se 1-2n-1e, abnd 2160 ft.

Wabash County—Failure: Central P. L. Co.'s Mundy 1, sw ne nw 32-1n-13w, abnd 2890 ft.

Wayne County—Failure: Edmiston Drlg. Co.'s Oskvig 1, sw nw ne 10-3s-6e, abnd 3400 ft.

INDIANA WILDCATS

Gibson County—Failure: J. R. Dee et al McKendree College 1, ne ne nw 14-1s-12w, abnd 2410 ft.

Miami County—Failure: Joseph Minneci's Berger 1, 24-29n-4e, abnd 1250 ft.

Posey County—Failures: Ind. Farm Bureau's Bauer 1, se ne nw 1-7s-13w, abnd 2820 ft.

Milo B. Siegel's McCarty 1, se se ne 19-7s-12w, abnd 2762 ft.

Posey County Oil Discovery: Walter Duncan's Weinschein 1, ne ne sw 16-7s-12w, McCl 2705-09 ft, pump 2712 bbls, td 2712 ft.

KANSAS WILDCATS

Barton County—Failure: W. L. Hartman's Schubert 1, sw se 17-18s-11w, Arb 3398 ft, abnd 2437 ft.

Butler County—Failures: G. McDonald & Kasper 1, sw sw nw 14-21s-4e, Miss 2495 ft, abnd 2560 ft.

K. T. Weideman's Farmer 1, se nw se 8-29s-8e, K.C. 1998 ft, Arb 3081 ft, abnd 3086 ft.

Cowley County—Failure: Wolf Crk. Oil Co.'s Bussert 1, se nw sw 23-31s-3e, Miss 3048 ft, Arb 3376 ft, abnd 3376 ft.

Pratt County—Failure: Lion O&R's Ficham 1, sw se 29-28s-12w, Lans 3800 ft, Simp 4528 ft, Arb 4643 ft, abnd 4700 ft.

Russell County—Failure: Lion O&R's Daniels 1, c ne sw 21-15s-11w, Lans 2909 ft, Arb 3272 ft, abnd 3327 ft.

KENTUCKY WILDCATS

Henderson County—Failures: Cherry & Kidd's Heirs 1, 13-O-22, abnd 2701 ft.

Sohio's Rash 1-A, 13-Q-20, abnd 2820 ft.

Union County—Failure: Cook & Lock's Proctor 2, 4-P-20, abnd 2287 ft.

SOUTH LOUISIANA WILDCAT

St. Mary Parish—Bayou Carlin Discovery: Humble's Miami Corp. 1-H, start USCGS "Twin" go s 9707.5 th e 8774.2 to lcn 660 s 660 e of nwc T-16s-8e, perf 79 shots 11,600-11 ft, flow 264 bbls 34.8-gr, 9/64-in, td 11,919 ft.

MISSISSIPPI WILDCAT

Scott County—Failure: Pan-American's School Land 1, c se se 16-5n-6e, Eutaw 5750 ft, Tuscaloosa 6292 ft, Massive sd 7284 ft, Comanchean 7335 ft, abnd 7447 ft.

MISSISSIPPI OUTPOST

Franklin County—Cranfield Extension: Gulf's Ella G. Lees 1, nwc 32-7n-1e, 1½ mi e of prod in Cranfield fld, 72 per Massive sd 10,398-10,410 ft, flow 297 bbls 38.8-gr oil 12 hrs, 11/64-in tbg chk, td 10,520 ft.

NEW MEXICO WILDCATS

Eddy County—Failure: R. S. Magruder et al (was A. & M. Pet. Co.'s) State 1, (OWDD) c sw ne 15-21s-27e, elev 3308 ft, otd 1553 ft, abnd 2350 ft.

Torrance County—Failure: C. O. Byrnes et al's Lammon 1, c nw ne 3-3n-12e, jkd 678 ft.

NEW MEXICO OUTPOST

Lea County—Maljamar Field: Barney Cockburn et al's Wyatt 1, c se se 33-17s-33e, 1½ mi se prod, elev 4056 ft, salt 1580-2710 ft, San Andres 4535 ft, abnd 7044 ft.

OKLAHOMA WILDCATS

Beckham County—Failure: Bud Lewis' Prather 2, se sw nw 8-7n-25w, lm 1968 ft, abnd 2080 ft.

Creek County—Failure: L. B. Jackson et al Fixico's 1, nw se sw 28-17n-9e, Miss 3013 ft, abnd 3050 ft.

Garvin County—Failure: Rock Hill Sd. & Gravel Co.'s Billman 1, sw sw sw 9-2n-3e, Arb 2495 ft, abnd 2577 ft.

Jefferson County—Failure: Paul McIntyre et al Stallings 1, se sw se 10-4s-4w, Arb 3539 ft, abnd 3631 ft.

Oklahoma County—Failure: Magnolia's Dills 1, ne sw ne 22-11n-1w, Syl 6336 ft, Viola 6437 ft, 2nd Wx 6680 ft, abnd 6681 ft.

Pawnee County—Failure: J. E. Crosbie's Dewitt 1, ne se nw 20-20n-5e, abnd 3837 ft.

Pawnee County—Oil Discovery: Sunray Oil's Gilbert 1, nw sw ne 30-23n-3e, Lay 2276-32 ft, pump 30 bbls, td 2732 ft.

Stephens County—Failure: Lundy & Morgan's Cox 1, c sw nw 36-1s-7w, abnd 5022 ft.

WEST TEXAS WILDCATS

Glasscock County—Failure: Phillips' McDowell-McDow 1, ne ne nw T&P Ry, 31, blk 34, T-2-S, elev 2533 ft, anhy 1030 ft, Yates 1620 ft, brown li 2040 ft, San Andres 2330 ft, Ellenburger 10,410 ft, abnd 10,915 ft.

Pecos County—Failures: General Crude Oil Co.'s Winfield 1, ne ne nw T. & St. L. Ry. 2, blk 132, elev 3124 ft, Yates 2275 ft, abnd 3514 ft.

Phillips' Powell-Powe 1, 4441 ewl 660 nsl of n½ sect 3, S. M. Hoffman sur, elev 2917 ft, abnd in Pennsylvanian 12,127 ft.

Tom Green County—Failure: Harley Sadler et al's Mims 1, c sw ne H&TC Ry, 80, blk 6, elev 2326 ft, anhy 990 ft, abnd 1830 ft.

Upton County—Failure: E. E. Barrett-Lancaster-Brown's O Harrow 2-a-a, 345 wel 570 nsl of nw GC&SF Ry, 17, blk 4½, elev 3063 ft, Yates 2850 ft, abnd 3503 ft.

WEST TEXAS OUTPOSTS

Martin County—Mabee Extension: Mabee O&G Co.'s Mabee 1-B, c sw sw G&MMB&A 14, blk 39, T-2-N, 1¼ mi ne extension, elev 2880 ft, Yates 2970 ft, brown li 4375 ft, San Andres 4635 ft, pump 166 bbls 31.8-gr, shot 250 qts 4650-4712 ft.

Dawson County—Welch Failure: Magnolia's Dawson 1, c sw nw E.L. & RR 29, blk M, 1⅓ mi ne prod, elev 3124 ft, Yates 3160 ft, brown li 4100 ft, San Andres 4620 ft, abnd 5126 ft.

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WEST TEXAS NEW PAY TEST

Ector County—Foster Field Holt Lime Failure: Forest Dev. Corp.'s Moss 12-A, c sw se T&P Ry. 42, blk 42, T-2-S, elev 2913 ft, Yates 2860 ft, lí 4015 ft, San Andres 4560 ft, abnd 6030 ft.

WEST CENTRAL TEXAS WILDCATS

Concho County—Failure: Mae Belcher et al's Loveless-Lockhart 1-a, 660 snl 740 wel sect 10, L. M. Higginson sur, A-1168, elev 2002 ft, Ellenburger 2610 ft, Cambrian 3338 ft, abnd 3569 ft.

Runnels County—Failure: Barron Kidd-A. W. Cherry's Fowler 1, 330 out nwc s½ E. T. Ry. 150, elev 1668 ft, abnd 3615 ft.

Taylor County—Failure: Ernest L. Wilson-Paul Steed's Witt 1-a, 575 nsl 700 ewl S. P. Ry. 22, blk 1, elev 1999 ft, Saddle Creek 2110 to 2135 ft, Palo Pinto 3565 ft, abnd 3643 ft.

SOUTH CENTRAL TEXAS WILDCATS

Atascosa County — Failure: Quintana Pet. Corp.'s C. Muil 1, 2714 fr nel 5000 fr sel 1589-ac lse, J. C. Mattison sur 467, abnd 8965 ft.

Val Verde County—Failure: O. H. Hammer's L. E. Davis 1, 637.5 fr nl 50 fr el sur 4, on 5087-ac lse, GC&SF sur, blk BBYY, sect 2886, abnd 3200 ft.

SOUTHWEST TEXAS WILDCATS

Duval County—Failure: Haynes B. Owenby Drlg. Co.'s J. T. Dinn 1, 330 fr sl 990 fr el AB&M sur 458 and 80-ac lse, abnd 3511 ft.

Jim Hogg County—Failure: H. M. Amsler's M. Garza Est. 1, 330 fr ne&sel blk 9, sur 39, 160-ac lse, elev 507, ft, sw in perfs 1036-42 ft, abnd 3017 ft.

McMullen County—Failure: Santa Clara Oil Co.'s Volney M. Brown et al 1-A, 660 fr wl 506.5 fr nl sect 10, R. H. Brown sur, gas-cut mud and sul wtr 3572-76 ft, abnd 6503 ft.

Starr County—Failure: Sun's Cantu et al 1, 467 fr n&wl tr 2 porc 39-40, 285.8-ac lse, abnd 6888 ft.

Webb County—Failure: Humble's Mary Kate Withers 1, 4480-ac lse, Jesus Jaurez sur 1412, Watkins-Withers area, stuck drill pipe, abnd 6602 ft.

LOWER TEXAS COAST WILDCATS

Goliad County—Failure: Rowan & Hope's Grace Ryals 1, 467 fr nw&swl 220-ac lse, John Shelly sur, abnd 5508 ft.

Karnes County—Failure: Union Prod. Co.'s M. Schaefer 1, 467 fr se&swl 367.4-ac lse, LPIA&M Co. sur, sw in perf 6088-96 ft, abnd 6227 ft.

San Patricio County—Failure: Lonnie Glasscock's Mrs. Louise Newman 2, 660 fr sl 1782 fr wl 500-ac lse, J. W. Bullard sbdn, 2027 w nw Well 1, abnd 7001 ft.

UPPER TEXAS COAST WILDCATS

Brazoria County—Failure: General Crude's Belle H. Wusdom 5, 1752.4 fr sel 2250 fr nel 840-ac lse, Abraham Darst sur, 1 mi w Damon Mound, deep flk test, abnd 6037 ft.

Chambers County—Failure: Gulf's W. F. Mayes et al 1, 676 ely alg nl A. D. Mayes sur fr nwc same 3500 nw at ra in E. Derr sur, 8066.36-ac lse, abnd 9943 ft.

NORTH TEXAS WILDCATS

Archer County—Failure: S. F. Hutcheson et al's Powell 1, 1290 n 150 e of m/s/swc Wm. Henry sur A-163, abnd 1367 ft.

Clay County — Failure: Staley Oil Co.'s Schaffner 2, 1433 e 2358 n of sec blk 84, Byers sur, but in McGowan-Butler sur A-219, abnd 1382 ft.

Cooke County — Failure: S. D. Johnson & Acme Die & Machine Co.'s Bundy 1, 140 snl 1300 ewl of P. P. Cady sur A-1239, schist 2154 ft, abnd 2174 ft.

Throckmorton County—Failure: Cochran & Cain's Walker 1, 150 out m/n/sec of W. Bramlett sur A-26, abnd 981 ft.

Wichita County—Failures: Akin-Domock et al's Lalk 1, 200 nsl 1000 ewl blk 286, Waggoner Colony Lands, abnd 2102 ft.

Bridwell Oil Co.s Bridwell 5, 150 wel 1100 snl AB&M sect 12, A-809, abnd 1659 ft.

Wilbarger County—Failure: Million Oil Co.'s Waggoner Est. 1, 1070 nsl 330 wel blk 131, Waggoner Colony Lands, elev 1162 ft, Canyon 3080 ft, Bend 4375 ft, Ellenburger 4798 ft, abnd 4912 ft.

Young County—Failure: F. P. Timberlake-H. M. Kelleher's Prideaux 1, 1350 s 150 e of nec I&GN Ry. A-1324, but in A. Rohus sur, abnd 747 ft.

WESTERN CANADA WILDCATS

Alberta Foothills — Turner Valley Failure: Foothills O&G Co.'s No. 22, lsd 2 26-20-3w5th, abnd in Upper Blairmore 9782 ft.

South Alberta Plains—Stirling Failure: Imperial Oil's Stirling 2, lsd 4 15-7-19w4th, abnd 5484 ft in Devonian Dolomite.

WILDCAT STARTS

ALABAMA

Clarke County: California's White City Plantation Co. 1, swc 6-7n-1e, ru.

ARKANSAS

Arkansas County: C. E. Osborne's Stuttgart-Price 1, c ne sw 16-2s-3w, lcn.

CALIFORNIA

Kern County: Bradford Bishop's Bradford 14-1, 14-28s-28e, W. Round Mtn. area, dr.

J. H. Maurer and A. C. Fisher's Jean 3, 15-26s-28e, N. Mt. Poso area, lcn.

Priest & DeKalb's Blake 12, 25-25s-18e, Devils Den area, dr.

Richfield Oil Corp.'s S.P. 15-1, 31-29s-30e, Edison area, lcn.

Santa Barbara County: Whittier Associates' G. Buell 2, 23-7n-32w, Los Alamos area, dr.

Los Angeles County: Los Angeles Brewing Co.'s (was called Cinnabar Dr. & Expl. Co.) Jones Community 1, 24-2s-11w, Turnbull Canyon area, rur.

ILLINOIS

Clay County: Gulf's Colclasure 1, se se se 12-4n-5e, lcn.

Edwards County: Burr Lambert's Souey 1, se ne se 21-1n-10e, lcn.

Effingham County: W. R. Lewis-J. McNeil's Haskenherm 1, sw se se 10-8n-7e, lcn.

Franklin County: Nat'l Assn. Pet.'s Old Ben Coal Co. 1, nw ne se 16-5s-2e, lcn.

Jefferson County: Cameron Oil's Gardner 1, se nw nw 18-2s-2e, lcn.

E. T. Robinson & Wisconsin's Long et al 1, nw ne ne 7-4s-3e, lcn.

Marion County: Schlafly & Slivka's Young 1, sw se sw 6-2n-2e, lcn.

Wayne County: Lucus Dev. Co.'s Lucas 2, sw sw ne 7-1n-6e, lcn.

INDIANA

Gibson County: C. E. Skiles & McBride's Dunnigan 1, nw ne se 15-2s-12w, lcn.

Jackson County: Aetna Oil's Turkhorn 1, sw nw nw 6-4n-5e, dr.

Perry County: Lora Lorkin's Groves 2, se se se 17-5s-2w, lcn.

Cannelton Drlg. Syndicate's Amer. Cannel Coal Co. 1, sw sw ne 11-7s-3w, lcn.

Posey County: Milo B. Siegel's Eva & Celia Crunk 1, nw nw ne 30-7s-12w, lcn.

Cherry & Kidd's Allen Gray Est. 2, sw se sw 36-7s-15w, lcn.

Spencer County: F. H. Rhodes' Douthit-McKinney 1, se ne ne 30-7s-7w, lcn.

F. H. Rhodes' Douthit 2, sw ne ne 36-7s-7w, lcn.

KANSAS

Butler County: J. F. Morris & Eldorado's Dean 1, c w½ nw nw 17-26s-6e, dr.

Ellis County: Volcanic Oil Co.'s Jackman 1, ne se 34-12s-19e, dr.

Sloan & Zook's Hill 1, nw cor 15-12s-20e, dr.

Cinoil Oil Co.'s Bernes 1, se nw nw 1-14s-16w, dr.

Haskell County: Carter Oil Co.'s Dietz 1, 50 ft w of c 6-29s-31w, lcn.

Pawnee County: Huber & Kiowa's Singer 1, nw nw se 5-20s-17w, lcn.

Continental's Osgood 1, ne cor 14-22s-19w, lcn.

Phillips County: Stanolind's Willtrout 1, sw cor 35-1s-20w, abnd 960 ft.

Saline County: Stanolind & Skelly's Thelander 1, c w½ sw ne 22-14s-2w, lcn.

Sedgwick County: Beech Aircraft's Hinkle 1, sw se nw 6-27s-2e, lcn.

Trego County: Ohio Oil's Sikiman 1, c ne sw 31-11s-22w, lcn.

KENTUCKY

Daviess County: F. McIntryre's Fee 1, 12-Q-30, lcn.

Miller & Shiarella's Hayden 1, 12-N-27, dr.

Hancock County: Braden & Morgan's Hendricks 1, 24-O-34, dr.

C. V. Chapman et al Mrs. White 1, 17-O-34, comp.

Webster County: Iley Browning's Jenkins 1, 2-M-23, lcn.

NORTH LOUISIANA

DeSoto Parish: H. R. Randall's Simmons-Federal Ld. Bnk. 1, c se ne 36-15n-15w, 5000-ft test.

Sabine Parish: Carter Oil Co.'s Pickering l.br. Co. 1, se sw 14-4n-11w, Tuscaloosa test.

MISSISSIPPI

Hinds County: Leonard Jones' M. Lerew 1, nw ne 15-5n-1e, lcn.

Huckleberry & Cline's School Lands 1, 16-6n-1w, lcn.

Smith County: Gulf's Grissom-Ainsworth 1, nwc 21-10n-14w, lcn.

NEW MEXICO

Chaves County: Richfield Oil Corp.'s Lillian

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■ FOR SALE: Four 100 HP 300 WP Lucy rotary boilers, completely reconditioned and guaranteed to pass state or insprance inspection. General Supply Co., 511 E. Atchison St., Pampa, Texas.

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1—7¼ x 14 Ideal power pump
1—WAK Waukesha motor
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■ FOR SALE: No. 2 National with chain driven sandreel and jackshaft $750. Bargain on parts for No. 2 Nationals. Kersey & Company, Artesia, New Mexico.

■ FOR SALE: 400 barrels per month heavy crude. Wells 800 feet. Good producing sand at 1700 feet. Also gasoline rig, might drill shallow proven stuff for interest. A. R. Lewis, Corsicana, Texas.

HELP WANTED

■ Wanted by a consulting geophysical organization: Petroleum Engineers with Hayward Mud-logging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 45, c/o The Oil Weekly, Houston, Texas.

■ Petroleum Engineer for well servicing company. Address: Box 4, c/o The Oil Weekly, Houston, Texas.

■ HELP WANTED: Gulf Coast District Geologist for expanding independent oil company. Should have wide acquaintance among major companies and be able to do some trading. Position offers good future. Give full personal data, experience, references, and salary desired. Address: Box 7, c/o The Oil Weekly, Houston, Texas.

■ Graduate Geologist for foreign exploration; at least three years experience in field geological mapping, preferably in Rocky Mountains or in South America.
Field Geophysicist to supervise contract geophysical parties in eastern Venezuela: seismograph party chief experience desirable.
Well Geologist (Foreign) to watch geologic progress of wells, care for samples, pick casing points, etc. Paleontological training, experience in well progress geology desirable. Major oil company. Apply P. O. Box 2819, Dallas, Texas.

■ FIELD SUPERINTENDENT: Location Eastern Venezuela. Graduate Engineer preferred, well versed in oil field operations, and with extensive supervisory and administrative experience. Should be able to organize and coordinate the varied operations of an exploratory drilling program. Must have good knowledge of oil field conditions generally, and be able to supervise several service departments such as transportation, machine shop and field engineering. Will have charge of the central camp where these activities are centered. In addition to salary there is paid a living allowance and the company furnishes a house at headquarters. Major oil company. Reply P. O. Box 2819, Dallas 1, Texas.

■ Eastman Oil Well Survey Company has open the position of field sales and service representative for the West Texas area. Applicant must be well acquainted in and have good knowledge of the oil and drilling industry. Car and expenses furnished. Please address inquiry to Box 1324, Odessa, Texas.

■ WANTED: Driller experienced in the drilling of seismograph shot holes with either hydraulic or mechanical pulldown type drilling rigs. All operations within continental United States. Write, giving qualifications, experience and draft status, if available under W.M.C. regulations, to Phillips Petroleum Company, Geophysical Section, Personnel Division, Bartlesville, Oklahoma. All inquiries confidential.

NOTICES

OIL LOANS WANTED

We want good oil loans. We also buy royalties and oil payments.

BAPTIST FOUNDATION
Baptist Bldg. Dallas, Texas

Coll-Federal 1, c nw se 18-11s-27e, 9000-ft Ellenburger test.

Lea County: R. Olsen Oil Co.'s State 1, c se se 29-11s-32e, spud on 5100-ft San Andres test.

OKLAHOMA

Caddo County: L. B. Jackson's Blankship 1, nw sw nw 33-10n-13e, rust.

Carter County: George Stagnor's Brady 1, ne sw sw 32-1s-2w, dr.
Samedan's Croom 1, nw ne se 20-4s-1e, lcn.

Cotton County: W. J. Hamilton's Kinnard 1, se nw se 23-5s-12w, woc.

Hughes County: Gillispie & Sons et al's Patten 1, se nw se 18-6n-8e, lcn.

Kiowa County: Fox & Fox's Campbell 1-A, nw sw sw 36-7n-14w, dr.

SITUATIONS WANTED

■ Position Wanted: Drilling and production superintendent with large independent operator desires change. Middle aged, good education, sober; competent and capable of holding important position with large or small company. A-1 references from past and present employers. Thoroughly familiar with deep drilling and production in both Gulf Coast and Mid-Continent areas; also specialize in workovers and handling of old production. Address: Box 1, c/o The Oil Weekly, Houston, Texas.

■ Land and Title Man with major company desires same position with small company or independents. Age 26. Experience in Arkansas, Louisiana, Mississippi and Texas. Address: Box 8, c/o The Oil Weekly, Houston, Texas.

WANTED TO BUY

■ WANTED TO BUY: Vertical Askania Magnetometer. Will pay reasonable price. Address: Box 3, c/o The Oil Weekly, Houston, Texas.

POSITIONS WANTED BY SERVICE MEN

■ In the interest of both employers and employes, **The Oil Weekly,** through its Overseas Pony Edition, which is sent free to 6500 former oil men now in the services, has offered to run advertisements from those who will be seeking work once they are discharged. In some cases **The Oil Weekly** has a few more details but, generally speaking, direct correspondence would be advisable. Unless otherwise indicated it may be some time before the person named in the advertisement is available.

■ Pipefitting, plumbing or maintenance work wanted. 5 years pipeline experience in construction and maintenance; 3 years construction, pipefitting, plumbing and maintenance; 6 months in charge of pipe laying; also time keeping, estimating. Age 31.
E. A. Norris, SF 2/c
5th Naval Const. Batt.
Co. B, c/o FPO
San Francisco, Calif.

■ Honorably discharged seaman wants service or roustabout foreman job. Experience with major oil companies as relief operator, rotary driller, roustabout foreman. Will consider work in foreign country. Age 34, 3 dependents. One year college.
Charles R. James
Box 1151
Grayback, Texas

■ Postwar work wanted as operator of diesel and gas equipment. Two years experience with Port Engineers overseas, also maintenance and operation of bulldozer, power shovels, etc. Want to get into petroleum engineering.
T/Sgt. B. P. Ippolito
10th P/E, ASN 16122942
APO 391, c/o Postmaster, N. Y.

■ Want postwar job as radio mechanic and operator, preferably South America. Trained in Radio Operator Mechanics' School, prewar oil employment by major company. Age 20.
Pfc. Garth N. Elmore, 15344560
Class 745, LVAAF, Las Vegas, Nevada.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly
P. O. Box 2608 Houston 1, Texas

A clean wire line helps your crew. They can work safer and better on a clean floor, free from drippings. With a Patterson-Ballagh Wire Line Wiper the line is stripped completely of mud and oil. A compact steel housing contains a spiral rubber which is inexpensive and easily replaced. The rubber wipes the line as it comes out of the hole. Spark-proof. Use one on every well. Now made of PBX, Patterson-Ballagh's new synthetic rubber.

See Composite Catalog

Patterson-Ballagh WIRE LINE WIPERS

Los Angeles 1 Houston 10 New York 6

Austin L. Lewis' Coakley 1, se ne se 30-7n-17w, machine.

Noble County: Chas. Jenkins' Armstrong 1, sw nw 2-23n-2w, dr.

Seminole County: Okla. Nat. Gas Co.'s Jarvis 1, ne se nw 5-10n-6e, c&p.

WEST TEXAS

Dickens County: Humble's Matador L&C Co. 3-B, 660 out swc sect 1, Blanco CSL, 7500-ft Ellenburger test.

Pecos County: Lion Oil Co.'s H. J. Eaton 1, 4420 ewl 1980 snl sect 542, T. I. & M. Co. sur, 2½ mi sw Fort Stockton field, 3500-ft test.

Val Verde County: B. E. Wilson et al's Wilson-Hodge 2, 1417 s 940 e of nwc GC&SF Ry. 57, blk E, lcn.

WEST CENTRAL TEXAS

Jones County: Buttram's R. R. Carroll 1, 450 out nec Lbr 4, Lge 359, Goliad CSL, 2900-ft Swastika test.

SOUTH CENTRAL TEXAS

Bastrop County: H. W. Snowden's Ada Potts 1, 330 fr ne&sel 50-ac lse, Eliz Standifer Lge, 2500-ft test.

Gillespie County: L. Underwood Rowntree's H. Bierschwale 1, 440 fr nl 330 fr el 400-ac lse, J. Dickinson sur 976, 1200-ft cable tool test.

Medina County: C. G. Bigsby's Mrs. L. S. Bader 1, 330 fr nl 2310 fr el 40-ac lse, Medina Co. Sch. Ld. sect 295, 1500-ft cable tool test.

Val Verde County: B. E. Wilson's Wilson & Hodge 2, 1416.6 s 940.5 e of nwc GC&SF sect 57, 19,000-ac lse, lcn.

SOUTHWEST TEXAS

Duval County: Smith-Story & Wood Corp.'s Lelia Peters 1, 330 fr el 2310 fr nl sur 38 and 240-ac lse, dr 750 ft.

McMullen County: Plymouth Oil Co.'s Harry Ezzell 1, 660 fr wl 660 fr nl sw nw sect 8 Hayes Ezzell sbdn, 7500-ft test.

Starr County: T. E. Stephen's Francisca Guerra et al 1, 467 fr wl 2635 fr nl sh 34 and 517-ac lse, Porc 107, 4500-ft test.

Webb County: W. O. Killam's L. R. Ortiz 2, 330 fr s&wl sur 2026, porc 26, 4000-ac lse, 6000-ft test.

Sun's Isaac Hirsch et al 1, 1700 fr sl 3000 fr el sur 2030, 2880-ac lse, 7000-ft test.

Zapata County: Geo. H. Echols' Herlinda T. de Volpe Est. 3, 450 fr nl 1980 fr el 3000-ac lse, porc 32, Cinco de Mayo area, 3000-ft test.

LOWER TEXAS COAST

Brooks County: Sun's Mary M. Lasater 4, 330 fr nl 1130 fr el 1760-ac lse, HE&WT sur 349, 973 e ne Well 1, 6000-ft test.

Hidalgo County: La Gloria Corp.'s N. Weslaco Gas unit 1, 467 fr sl 400 fr wl Farm Tr. 98 of w tr sbdn, 11,140-ac lse, sect 145, 9000-ft test.

Kleberg County: Lonnie Glasscock's Paul O. Henry 1, 631.7 fr s&wl 689.7 fr nl lot 4, sect 9, 120-ac lse, KT&I sbdn, 7500-ft test.

Nueces County: L. M. Lockhart's E. H. Hermann 1, 660 fr wl 1250 fr nl 668-ac lse, Vicente Lopez de Herrera Gr, lots 2, 3, 4, 7000-ft test.

UPPER TEXAS COAST

Liberty County: Nat. Assoc. Pet. Co.'s W. S. Swilley 1, 1074 fr el 852.8 fr sl J. Coughran sur, 630-ac lse, 8500-ft test.

Wharton County: M. Thompson's Bessie Hudgins 1, 660 fr nw&swl e½ Morris & Cummings sur, sect 18, 160-ac lse, 6000-ft test.

EAST TEXAS

Hunt County: L. A. Helms et al's W. H. Adams 1, 400 n of m/s/sl 872 e of m/s/wl H. T. Chenowith sur, on 100-ac lse, Woodbine test.

NORTH TEXAS

Archer County: Frank Wood-A. R. Dillard's J. S. Melugin 1, 450 out nwc lot 36, or 600 nsl 450 ewl S.P. Ly. 1, A-406, 1350-ft test.

Clay County: Pan Oil Co.-Phillips' J. E. Moore 1, 1095 nsl 467 ewl sect 21, Hopkins CSL sur, Blue Grove, 6000-ft Ellenburger test.

Jack County: Hanlon & Buchanan's J. Moore 1-B, 330 snl 1320 ewl ne¼ BBB&C Ry. 2, A-1376, Ellenburger test.

Wichita County: Fain-McGaha-Sohio's Geo. G. Adams 1, 2074 nsl 1910 wel H&GN Ry. 37, A-162, dk for 4200-ft test.

Vortex Oil Corp. et al's H. Barwise 1, 1700 snl 200 wel of tr Jas. Cole sur A37, 2100-ft test.

C. D. Knight et al's N. J. Jacobi 1, 150 out sec blk 246, Waggoner Colony Lands, 1960-ft test.

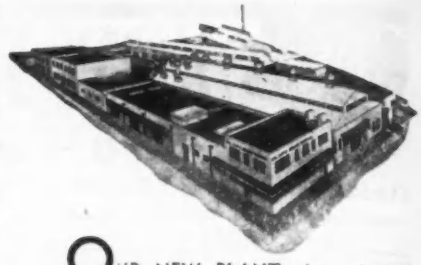
C. D. Knight et al's H. R. Scales 1, 150 snl 1250 ewl blk 304, Waggoner Colony Lands, 1960-ft test.

Nixon Pet. Co. et al's W. F. Hiesermann 1, 1950 nsl 1850 ewl Juan Armendaris sur A-10, 4500-ft Ellenburger test, dr 3745 ft.

Young County: L. T. Burns et al's J. H. Crain 1, 300 out sec n½ sect 169, TE&L Co. sur, 5200-ft Ellenburger test.

Bennett & Bennett's R. B. Allison 1, 1200 snl 750 ewl sect 266 TE&L Co. sur, sd 813 ft.

F. P. Timberlake-H. R. Kelleher's Prideaux 1-A, 4119 nsl 1354 wel of I&GN Ry. sur A-1324, spud on 775-ft test.



OUR NEW PLANT pictured above is the home of BRONZOID. This product contains pre-treated lead which arrests crystalline growth in the resultant bronze. The high compressive strength and low Brinnell hardness of BRONZOID combine the best features of bronze and babbitt metal. That's why it is called, "The Ultimate in Bearing Bronze."

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sealed against Sub tropical humidity—"Sextuples shield-in," improved uniformity, minimum size and weight, *plug-in terminal block.

**Also available with terminal lugs.*

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Full line of Geophysical electronic supplies.

HARRISON EQUIPMENT COMPANY

1422 SAN JACINTO PHONE PRESTON 4149 HOUSTON • TEXAS

ELECTRONIC • OIL EXPLORATION • SUPPLIES

The Good Old Days

"Here's a story about Apollo chasing a nymph and she turned into a tree."

"Lucky guy. Most gals I chase turn into a restaurant."

This Curious World

"Oh, Lord," prayed the Negro soldier, "don't let nothin' git a hold of me that You and me both can't handle."

Did you ever wonder how many fig leaves Eve tried on before she said: "I'll take this one?"

A stenographer friend boasts that her new boss is a perfect gentleman—all she has to do is slug him once in a while.

A woman may put on a riding habit and never go riding. She may put on a bathing suit and never go swimming. But, mister, when a woman puts on a wedding gown—she means business!

Modern Mother Goose

In 1905 when girls did swim,
They dressed like Mother Hubbard,
But now they have another whim,
And dress more like her cupboard.

Life Is So Simple

"Papa, what makes a man always give a woman a diamond engagement ring?"

"The woman."

Wild Woman

"Won't your wife hit the ceiling when you go home drunk tonight?"

"Probably. She's a hell of a shot."

More Sex Appeal, Maybe

"Say, that Joe is really dumb."

"Is he?"

"I'll say. He pays my wife five bucks to kiss her and I do it for nothing."

Please Don't, Sir

Familiar sights around certain Army camps are pet dogs wearing stripes. One such canine walked into an orderly room, chewed up a stack of important papers.

"But," raged the C. O., "why didn't you stop him?"

"How could I?" queried the private. "He outranked me."

The Bird in Hand

An ensign and a lieutenant (jg) were seated in a cafe. Across the way sat a seaman, second class, with a beautiful blonde. They (the gold braid) wanted to meet the gal, but they didn't know how to get around the sailor without pulling rank, which they didn't want to do. Finally the (jg) wrote a note and sent it to the sailor by the waiter. The note said, "I believe I studied with you at Yale, and the ensign believes he studied with you at Princeton. Please come over and straighten us out."

The seaman replied by return note, "I didn't study with the ensign at Princeton, nor did I study with you at Yale. But I did study at the National School of Taxidermy and I'm taking care of this pigeon myself."

Poet's Nook

Girls who like to show their
Knees,
Know all about the birds and
Bees.

Encore

Rose's are red,
Violet's are blue,
Lillie's are pink,
I saw them on the line.

Volume

"That singer has quite a large repertoire, doesn't she?"

"Yeah, and that dress makes it look worse."

Proof Aplenty

"What makes you think you are qualified for a position in the diplomatic corps?"

"Because I've been married 20 years and my wife still thinks I have a sick friend."

The Silencer

"What nice buttons you are sewing on your little boy's suit," said the gushing woman to the minister's wife. "My husband once had some like that on his suit."

"Yes, I get all my buttons out of the collection plate."

Down to a Fine Point

"What a gorgeous uniform. What branch of the service are you in?"

"I'm a naval surgeon."

"Goodness, you doctors certainly specialize in small things these days."

Wate and Fate

When his daughter returned from the girls' college, the farmer regarded her critically, and then demanded:

"Ain't you a lot fatter than you was?"

"Yes, dad," the girl admitted. "I weigh one hundred and forty pounds stripped for 'gym.'"

The father, horrified, shouted:

"Who in thunder is Jim?"

Beaut from a Beauty

"Where did you get that black eye?"

"I went to a dance last night and was struck by the beauty of the place."

CORE DRILLING SERVICE
to 2000 ft.
New Shot Hole Drills For Sale
ROUSE
EXPLORATION DRILLING CO.
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HOUSTON, TEXAS

Gotkool
WATER CANS & COOLERS

GOTT Water Cans are the practical way to keep drinking water cool for long periods, protected from impurities and always handy to the jab. Snug fitting large removable top, strongly built to withstand rough usage. GOTT Water Coolers have extra large covers and a handy non-leaking push button faucet. Your Supply Store has them, get one today! . . . . . .

GOTKOOL WATER CAN
Made in 1½, 2, 3, 5, 10, 15 and 20 gallon sizes. (Push-Button Faucet at slight additional cost.)

GOTKOOL WATER COOLER
Made in 2, 3, 5, 8, 10, 15 and 20 gallon sizes with Push-Button Faucet.

H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

MEN IN THE INDUSTRY NEWS

C. V. Sidwell, petroleum engineer, has been named head of the production department of the University of Tulsa college of petroleum sciences and engineering. Sidwell is a member of AIMME, AAPG and the Engineers club, and is the president of the Sidwell Engineering and the Drilling Mud companies, which he organized after 20 years as an engineer and executive with major oil companies and in private practice. At the University of Tulsa, he will assist in the reorganization of the department to give proper attention to development, exploitation, drilling, transportation and the new field of reservoir studies, and lay the foundation for graduate work in production paralleling that already established in refining and geology.

C. V. Sidwell

W. W. Robinson, Jr., has been appointed chief chemist of the technical service and research laboratory established at Signal Hill by the producing department of the Pacific Coast division of The Texas Company. Robinson was formerly chief chemist of the company's gasoline division laboratory at Signal Hill.

John W. Simpson has been named superintendent of the Coast Petroleum Corporation at Dickinson, Texas. Simpson has been assistant superintendent for the company at Dickinson for 11 years and succeeds the late **A. J. Clark.**

Hobart C. Ramsey, executive vice president of Worthington Pump and Machinery Corporation, has also been named president of the Ransome Machinery Company, subsidiary of Worthington in Dunellen, New Jersey. The appointment is effective August 1. Also named vice president and general manager of the Dunellen plant is **J. G. Ten Eyck,** who has completed five years active service with the Navy and who formerly was president of the industrial engineering firm of Ten Eyck, Inc. **Kenneth W. Horsman,** formerly superintendent of welding and steel fabrication at the Worthington Harrison Works, has been transferred to Ransome as works manager. New directors of Ransome are Ten Eyck and **Carl F. Oechsle,** vice president in charge of sales.

Hobart C. Ramsey

M. L. Powers, formerly state director of Trade and Industrial Eudcation in Oklahoma, is now with Shell Oil Company as training supervisor in the Mid-Continent area, with headquarters at Tulsa.

Lewis Finch, Jr., formerly engineer with the Stanolind Oil and Gas Company at Odessa, Texas, where he was coordinator and instructor of vocational education, has been transferred to Fort Worth, where he will be assistant division engineer for his company.

Mark Krause, formerly district engineer for Humble Oil & Refining Company at Wink, Texas, and evening school instructor in oil field subjects, has been transferred to the home office, in Houston.

Jack Woodward, formerly district engineer for Magnolia Petroleum Company at Alice, Texas, is now in charge of drilling fluid control, with headquarters in Dallas. While stationed in Alice, he taught a class of geologists in San Antonio, developing the principles of reservoir engineering.

I. R. Cunningham has been appointed comptroller of Creole Petroleum Corporation, affiliate of Standard Oil Company (New Jersey) operating in Venezuela. He succeeds **N. J. Beals,** who has joined Standard's producing department.

Cunningham joined Standard Oil Company of Venezuela, later merged with Creole, as a stenographer at Maracaibo in 1924. Two years later he became an accountant with the company and later manager of the accounting department.

R. J. Eiche and **T. G. Martin** have opened export offices in the Petroleum Building, Los Angeles. The new organization will represent the following companies in foreign countries: The Cavins Company, Chiksan Company, Eason-Therolf Tool Company, Eastman Oil Well Survey Corporation, Hamer Oil Tool Company, Hopper Machine Works, Incorporated, Pacific Perforating Company, Web Wilson Oil Tools, and Well Equipment Manufacturing Company.

L. S. Reid has resigned from Southern Natural Gas Company to become professor of chemistry at University of Oklahoma.

Allan Cree has been named president of the Rocky Mountain Oil Scouts Association to serve until the end of the current year. Other officers named include **Bert Bush,** vice president, and **D. W. Sharp,** secretary-treasurer.

George Beaulieu has retired as assistant in the oil and gas division of the Osage Indian Agency at Pawhuska, Oklahoma. He had served the Agency 40 years.

F. Harold Gray, Reed Roller Bit Company's London representative, has opened offices at No. 59 The Wool Exchange, Coleman Street, London E. C. 2, England. Gray has secured his release from the British army, being retired as a major. Most of his service was with the Royal Jugoslav forces operating in the middle East, first as British liaison officer and later as commandant to a training depot for partisan forces of the Jugoslav Army of National Liberation.

F. Harold Gray

Harry A. Hess has joined the editorial staff of THE OIL WEEKLY and will be located at Houston. He will specialize in the preparation of articles on operating methods. After graduating from the University of Pittsburgh with a degree in petroleum engineering, Hess spent a year in the oil fields of Kansas before joining Sinclair Prairie Oil Company. He was with the latter company in East Texas for eight years. He comes to THE OIL WEEKLY from the sales engineering department of Bethlehem Supply Company at Tulsa.

Paul Umbach has been placed in charge of a district geological office established at Albuquerque, New Mexico, by Stanolind Oil & Gas Company.

W. L. Loving, technical director of the Cabot Companies, Pampa, Texas, discussed "Carbon Black" before the Gulf Coast Section of the AIME in Houston August 14.

W. E. Weidler, vice president of Central Pipe Line Company, Salem, Illinois, has resigned and joined the Red Bank Oil Company as vice president and midwest representative with offices in Salem and Dallas.

Colonel Joseph P. Woodlock has been elected executive vice president of Rochester Ropes, Culpeper, Virginia, and will take over his duties when he is released from his assignment as associate director of the Office of Surplus Property in the Reconstruction Finance Corporation. He entered the Army shortly after Pearl Harbor, resigning his position as director of warehouses for Crucible Steel Company.

Col. Woodlock

N. J. Clarke has been elected senior vice president of Republic Steel Corporation, Cleveland, and **J. M. Schlendorf** has been advanced to vice president in charge of sales.

J. M. Schlendorf

N. J. Clarke

Clarke has been vice president in charge of sales since September, 1930, and Schlendorf has been his assistant.

Clarke started in 1897 with the Bourne-Fuller Company as an office boy, and in 1912 was made secretary and sales manager of the Upson Nut Company, which Bourne-Fuller had acquired. After World War I, in which he was a major in the ordnance department, he returned to Bourne-Fuller as vice president and general manager. In 1919 Clarke organized and became president of the Lake Erie Bolt & Nut Company.

Schlendorf served with American Sheet & Tin Plate Company, Willys-Overland Company, and in 1917 was named vice president in charge of sales for Central Steel Company, Massillon, Ohio. He continued in that position when Central Steel and the United Alloy Steel Corporation merged in 1926 to form the Central Alloy Steel Corporation. When the company became a part of Republic Steel Corporation in 1930 he was appointed manager of sales of the alloy steel division and in 1936 was made assistant vice president in charge of sales.

Elmer R. Smith, export representative, has left Los Angeles for oil centers in Mexico, Peru, Ecuador, Colombia, Venezuela and Trinidad. Smith represents H. C. Smith Oil Tool Company, MacClatchie Manufacturing Company, Pacific Wire Rope Company, Matin Wells and Eld Metal Company.

Forrest H. Ramage has been appointed assistant manager of sales of the pipe division of Republic Steel Corporation, with headquarters in Cleveland. He joined Republic Iron and Steel Company in 1926 as metallurgist, and since the latter became a unit of Republic Steel in 1930 he has supervised sales school training, product development and marketing research, and has recently been assistant manager of the commercial research division.

O. D. Small has been appointed sales manager for East Texas Electric Steel Company which recently opened sales offices in the Sterling Building, Houston.

Major W. A. Roever, formerly a sales engineer in the Houston office of Clark Brothers Company, is now a member of the Headquarters and Headquarters Battery, 17th AAA Group, a unit of the Ninth Air Defense Command, and is actively engaged in the anti-aircraft disarmament of Germany. The unit of which he is member has covered over 10,000 square miles of heavily defended German territory and has disarmed over 1600 German flak installations.

Colonel Gustave H. Vogel of Washington, D. C., has been awarded the Order of the British Empire and an Oak Leaf Cluster to the Legion of Merit for his work as chief of the Petroleum Section, Allied Force Headquarters in the Mediterranean Theater.

T/Sgt. James Logan of Luling, holder of the Congressional Medal of Honor, has been employed by the Humble Oil & Refining Company as a roustabout in the Friendswood field, Harris County, Texas.

S. J. Fox has been elected comptroller and **Roy O. Wegfors** treasurer of Signal Oil & Gas Company, Los Angeles.

Frank A. Stivers, vice president of The Texas-Empire Pipe Line Company, Tulsa, has been named president of the Tulsa Board of Education.

C. W. Patterson has been named sales engineer for the Detroit Diesel Engine Division, General Motors Corporation, at Tulsa, and will be on the staff of **Arch F. Campbell,** manager of General Motors Petroleum Industry Sales Department.

C. W. Turner has joined the West Texas geological staff of Gulf Oil Corporation at Midland, having previously served the company at Amarillo and Fort Worth.

R. H. McAshan has been engaged as Permian Basin scout for the Seaboard Oil Company with headquarters at Midland, Texas. He succeeds **Ed Dawson,** who recently was promoted to district landman at Corpus Christi.

H. L. Stevenson, petroleum engineer, has resigned from the Petrolite Corporation, St. Louis, to become treating engineer for the Tulsa station of the Acid Engineering Company. Before joining Petrolite, Stevenson was in petroleum research work for The Texas Company.

Fred E. Harrell has been appointed general works manager of Reliance Electric & Engineering Company, Cleveland. He has been chief engineer for the past two years, and succeeds **S. B. Taylor,** recently resigned. **William R. Hough,** product development engineer, has been named chief engineer, succeeding Harrell.

Herman J. Loebl has been appointed manager of distributors' service sales, a new department of Waukesha Motor Company, Waukesha, Wisconsin, and

Herman J. Loebl

Harvey R. Wilson

Harvey R. Wilson has been advanced to assistant service manager.

During Loebl's 17 years with the company, he has been in charge of field and factory branch service as executive assistant to the service manager, and also has acted as passenger traffic manager.

Wilson was manager of service at the San Francisco branch from 1932-1936. Returning to the factory at Waukesha to supervise field service engineers, he later became assistant to Loebl.

Thomas W. Palmer, attorney for Standard Oil Company (New Jersey), was awarded the Order of the Liberator, Venezuela's highest decoration, for his contribution in promoting friendship between Venezuela and the United States. The medal and citation was presented through the Venezuelan Embassey in Washington, D. C. Palmer is a former president of the Venezuelean Chamber of Commerce and as head of Jersey Standard's legal staff has spent many years in South American.

Orval Heck has resigned from the land and scouting department, Sinclair Prairie Oil Company, to join Continental Oil Company at Casper, Wyoming.

Deaths

W. L. Cross, chief clerk of Spang & Company, died August 6. Cross, 64, had been associated with the Butler, Pennsylvania, cable-tool manufacturing firm for 31 years.

A. F. Cameron, senior accountant with Shell Oil Company, Houston, died August 11. Cameron, 44, had been associated with Shell since 1933.

Chester L. Johnson, 56, East Texas oil operator, died August 12 in Tyler.

Graduate Study

"Where Do We Go From Here?" is the title of a bulletin recently published by Allis-Chalmers Manufacturing Company, Milwaukee 1, Wisconsin, describing an engineering graduate training course permitting exploration by the graduate engineer of production, sales, research, design, field work, administration and many other elements of industrial operation.

The course is based on the theory that an engineer finds the right job by working at several. The two-year course coordinates shop and office work in a program designed to fit individual aims and abilities. In applying this plan, the graduate engineer is given great flexibility in laying out his course. After discussion of experience, aptitudes, and preferences with an experienced advisor, a training schedule with a related sequence of jobs is projected. In progressing from one job to another the individual's ideas may change, in which case his course is modified to coincide with the new objectives.

Recently inaugurated, an Allis-Chalmers program of graduate study in cooperation with the Illinois Institute of Technology is also discussed. This program involves professional and technical education on the graduate school level, leading to a master's degree.

This booklet, No. E6085-A, is available by request to Allis-Chalmers.

California Production

The Division of Mines, Department of Natural Resources, Ferry Building, San Francisco 11, has issued Bulletin 130, "Economic Mineral Resources and Production of California."

The survey was made and the report prepared by Samuel H. Dolbear, consulting mining engineer of New York and Los Angeles, assisted by staff members of the Division of Mines and the following contributing authors: H. Foster Bain, Walter W. Bradley, Hadley R. Bramel, S. R. Coghlan, G. A. Joslin, Robert M. Searls, J. Clark Sutherland, Roy E. Tremoureux, Herbert Waterman.

Past yield is reviewed of the 60 and more mineral substances commercially produced in California and estimates presented of the reserves and future potentialities for their utilization outlined. These potentialities are also considered in terms of postwar employment in California's industries.

Copies may be obtained from the Department of Natural Resources. Price, $2.05.

Pump Engineering Data

Economy Pumps, Inc., Hamilton, Ohio, has published a new book, "Pump Engineering Data," which is an up-to-date manual with complete information on pumps and pump engineering.

The table of contents includes general information; principles of pump engineering; double-suction-single stage horizontal split case pumps; small vertical split multi-stage pumps; multi-stage horizontal split case pumps; clear liquid SCV pumps; sump pumps and ejectors, general and non-clog service; non-clogging horizontal and vertical open shaft pumps; axial flow pumps, vertical or horizontal; return line vacuum heating pumps; condensation pumps, centrifugal and reciprocating; caisson pumps; pump accessories; engineering data; and alphabetical index.

There is a use index which lists the the type of service and also the section of the manual where the recommended pump is listed.

Vocational News

The Industrial and Business Extension Training Bureau, Division of Extension, The University of Texas, Austin, has published the first issue of "Vocational News Bulletin for the Petroleum Industry." The bureau is in charge of the training program for oil field workers sponsored by the American Petroleum Institute. The bulletin gives news of vocational training activities in the various districts of Texas, and will be published each month.

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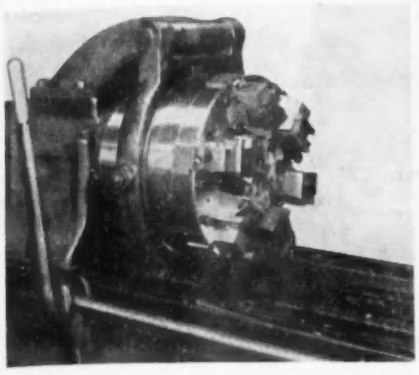
1—Die Head

Landis Machine Company, Waynesboro, Pennsylvania, is offering the Lanco 4-inch semi-receding six-chaser die head, with a capacity of from 2½- to 4-inch pipe size. The range is covered



by chaser holders mounted on slides of heavy cross-section to assure maximum rigidity.

The chaser holder slides are gibbed to the head body to provide compensation for wear. The interlocking design of the holder and slide assures a rigid clamping section of the two mating parts with only one clamping screw.

The die head uses the new chaser which provides great accuracy and speed in interchanging annd setting the chasers.

This die head is of the internal tripped type, in which a six-blade, insert blade type reamer in the bore of the head reams and chamfers the pipe during the threading operation and opens the head at any pre-determined thread length. The semi-receding action on the head eliminates the possibility of any chaser leave off marks on the thread as the head opens up. The reamer is adjustable by a clamping rod which extends through the machine spindle. Any desired thread length can be obtained by merely releasing the locking rod and turning the adjusting rod right hand or left hand to increase or decrease the thread length.

All parts of the die head are made from either high carbon or special allow steel, and are heat treated or case carburized and precision ground to assure maximum accuracy and long wearing quality. Zerk type fittings provide a means of forcing heavy grease into the chaser slides and other operating parts for lubricating purposes and also to act as a seal to prevent entry of fine cuttings and dirt to assure maximum life.

2—Valve Lubricant

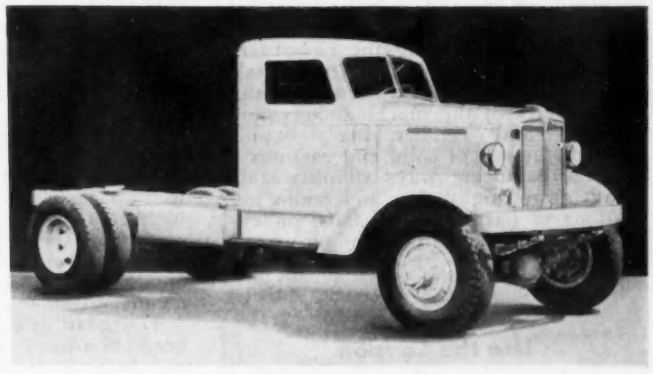
Merco Nordstrom Valve Company, Pittsburgh, announces a new valve lubricant which is said to possess unusual properties for severe services. The lubricant is a Dow-Corning silicone product and is identified as Nordcoseal Lubricant No. DC234-S.

The lubricant is colorless. An outstanding property is that the viscosity changes only slightly over a very wide temperature range.

3—Heavy-Duty Truck

Marmon-Herrington Company, Indianapolis, announces a new, heavy-duty all-wheel-drive truck, in two models, MH555-4 and MH440-4.

The larger of these, MH555-4 is powered by a 131 horsepower engine, on a wheelbase of 161 inches, with a permissible gross loaded weight of 27,000 pounds on 11.00 x 20 tires. The smaller model, MH440-4, is powered by a 118 horsepower engine, on a wheelbase of 158 inches, with a permissible gross loaded weight of 22,500 pounds on 10.00 x 20 tires. Both models have 10 forward speeds and 4 reverses.



These trucks retain features used by the company in previous designs such as the multiple-wheel drive, low center of gravity, greater approach angle, constant velocity steering end joints, etc., but also include numerous design and construction refinements that have arisen out of the company's experience in producing heavy-duty military and commercial vehicles. These improvements include new double-reduction axles, powerful air brakes, and a new steering gear design which makes for easier and more positive steering control.

Cabs have been redesigned and streamlined for greater comfort. Eye appeal has also been considered and wider, more graceful fenders not only are better to look at, but provide greater protection.

4—Brake Block

The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Passaic, New Jersey, has perfected a new, patented Key-Lok brake block which is said to have quick replacement features.

The block consists of lateral "fishtail" metal strips or keepers in which bolts are inserted, spaced to fit the brake bands, and these keepers slide into fishtail slots cut into the block.

By this method of replacement, bolts, bands or shoes need not be removed for relining. All that need be done is to loosen the keeper nuts slightly, slide off the old and put on the new, tighten the bolts and make normal adjustments.

The manufacturer claims the following features for the block: It can be changed quickly; deposits of foreign matter in bolt holes are eliminated; scoring is eliminated; friction surface is increased; holding ability of the block to the shoe is increased; the block is adaptable to both internal and external applications; and installation and maintenance costs are reduced.

5—Balancing Ways

The Ideal Commutator Dresser Company, Sycamore, Illinois, announces a new line of super sensitive balancing ways that are said to revolutionize static balancing operations.

Through the use of "scale type" bear-

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ings in the small 10-inch size, sensitivity to .007 ounce inches is made possible. Special sensitive bearings used in the 20- and 42-inch sizes permit accuracy in balancing to .009.

The work is carried on free turning discs, mounted on precision bearings. Discs are ground on outside diameters, mounted on ground spindles and balanced with extreme care.

Standards supporting the revolving discs are movable on shafts to take different lengths of armatures within the capacity of the machine. Maximum strength and rigidity are obtained through the use of solid end castings.

These balancing ways simplify static balancing, straightening and truing operations of parts such as fans, pulleys, fly wheels, crank shafts, grinding wheels, armatures, etc.

Use the Coupon

For free copies of Manufacturers' Literature or more information on products described on these pages, use the convenient mailing coupon on page 101.

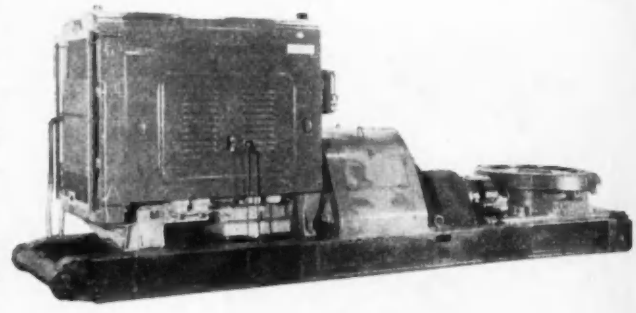
6—Milling Tools

A-1 Bit & Tool Company, Houston, has added self-sharpening milling tools to its line of oil field equipment. These milling tools are fast-cutting, simple in operation, rugged and efficient, according to the manufacturer. Self-sharpening continues as long as any of the blades are left.

The tools are recommended for milling up pipe, subs, tool joints, etc., and will mill all types of pipe from Securaloy through Grade N-80 casing. The top of the fish is left smooth and clean, in case subsequent operations are to be performed. It is claimed that due to the unique design of the mill body, it will not cut into or through the casing in which milling is being performed. The tools are furnished in three regular types: flat-bottom, flat bottom with pilot, and round nose.

7—Drilling Unit

Oilwell Supply Company, Dallas, announces a new rotary drilling unit, "Oilwell" CT-1715B. This unit is a compact and portable assembly on steel skids for independent operation of the rotary. It provides a direct drive from an internal combustion engine through a hydraulic torque converter and geared speed increaser or decreaser to an "Oilwell" 17½-inch Oilbath rotary of modern high-speed design, and embodies numerous improvements.



The gear box has been improved and may be used as a speed increaser when torque requirements are not excessive and maximum rotary table speed is desired. When applications require high torque and blower speed characteristics, an interchanging of gears permits the gear box to be used as a speed reducer. This interchange of gears can be accomplished without the necessity of purchasing extra parts.

8—Pipe Wiper Cutter

Patterson-Ballagh Corporation, Los Angeles, has developed a pipe wiper cutter for use with the pipe wipers made by the company.

Wipers may be purchased uncut. The cutter enables the user to cut the wiper to any of the drill pipe sizes from 2⅞ to 6⅝ inches. The body of the cutter is aluminum. Fittings are chrome plated. The cutting block is of rubber, and the cutter is fitted with spare blades and a stone for sharpening them. Full instructions are cast in the plate. The cutter is drilled for bolts to fasten it to a table. Shipping weight is 20 pounds.

9—Power Saw

Harry A. Lowther Company, Chicago, has published a bulletin describing the Lowther C-Saw, a portable power saw suitable for a variety of purposes including the clearing of land. This saw is now obtainable without any preference rating.

10—All Service Unit

Franks Manufacturing Corporation, Tulsa, has issued a bulletin describing the improved Model 7000 All-Service Telescoper Unit. The Model 7000 Truck-mounted unit, with spudding attachment which also may be installed either initially or later, affords a wide variety of uses, including cleaning out and drilling, follow-up rotary drilling, drilling in completions, testing strata, jarring-out liners, and fishing work and taking potentials.

Literature

11—Engines

The Sterling Engine Company, Buffalo, New York, has released a new edition of a catalog that describes and briefs the specifications of Sterling engines.

12—Solvents

Dowell Incorporated, Tulsa, has published a bulletin, "More Power to America's Industry," which explains and illustrates this company's service to operators of heat exchange equipment. The service, a simplified and thorough

means of removing scale from all surfaces including those not reached by any other method, is of universal application. Equipment includes motorized units operating from many strategic centers, for mixing, heating and pumping the prescribed solvent.

13—Manganese Steel

American Manganese Steel Division, Chicago Heights, Illinois, has published Bulletin 1144-NM on non-magnetic applications for Amsco manganese steel. Described are typical applications where freedom from magnetism in addition to the ability to withstand shock and wear was decisive in the selection of manganese steel.

14—Copper and Brass

Copper & Brass Research Association, New York, has issued a booklet, "Copper and Brass in the Petroleum Industry," which illustrates and discusses the vital part copper and brass have played in the petroleum industry during the war.

15—Fluid Cleaner

The Cuno Engineering Corporation, Meriden, Connecticut, has published a bulletin titled "Quick Facts On Keeping Fluids Clean." The bulletin discusses positive mechanical cleaning which removes all kinds of solids from all kinds of fluids, guards equipment from damage and prevents product contamination, according to the authors.

16—Tractors

Caterpillar Tractor Company, Peoria, Illinois, has published Form 8903 which illustrates a wide range of Caterpillar applications. The booklet stresses the capabilities of a machine and the requirements of the job it is to do, the design and manufacture of the equipment, prime and auxiliary equipment, cost, length of life, ease of maintenance and repairs and availability of parts and service.

Schlumberger Reorganizes Its Mid-Continent Operations

Schlumberger Well Surveying Corporation, Houston, has centralized its operations in the Mid-Continent under its Tulsa office and the continued management of R. G. Hamilton, with L. A. Allaud as technical assistant. This office will supervise all operations in Oklahoma, Kansas and the Texas Panhandle. The work in Kansas will be under the supervision of C. K. Ruddick, previously in Oklahoma City, where he has been replaced by W. R. Mills.

Schlumberger has established two new headquarters. The Florida division has been organized under the management of M. C. Watson, with headquarters at Tallahassee. Operations in North Louisiana, East Texas and Arkansas are now under the supervision of R. T. Wade, with headquarters at Shreveport.

J. L. Mathieu, former general sales manager, has relinquished his duties to devote his entire time to exploitation and rehabilitation of the Schlumberger company operating abroad.

Denver Dealer Franchise of Cummins Engines Is Sold

Sale of the Denver dealer franchise for Cummins diesel engines to Jay B. Chambers, Cummins regional manager in the Mid-Continent area since 1935, has been announced by the Cummins Engine Company, Inc., Columbus, Indiana.

Jay B. Chambers

Since 1942, the Denver dealership has been owned and operated by the manufacturer under the name of Cummins Diesel Sales of Colorado, Inc. With the sale of the property to Chambers, the organization will be known as Cummins Diesel Sales of Colorado Company.

Under the new ownership, the sales and service organization will continue to occupy its present quarters at 2501 Champa Street, Denver.

The staff of 15 employes will be retained, with Lars O. Prestrud remaining as manager.

Security Engineering Firm To Be Acquired by Dresser

Security Engineering Company, Inc., Whittier, California, will be acquired by Dresser Industries, Inc., Cleveland, according to a joint announcement by H. N. Mallon, president of Dresser, and W. E. Seivers, executive vice president of Security.

The agreement has been signed by the officers of both companies but is subject to the approval of the Commissioner of Corporations of California and Security stockholders.

Southern Engine to Handle Coast Company's Products

Southern Engine & Pump Company, Houston, has been appointed distributor for products of American Liquid Gas Corporation, of Los Angeles, which include mixers or carburetors, converters, heat exchangers and regulators. Stocks of these units and replacement parts will be carried in Kilgore and Dallas. Engineers experienced in this line of equipment are also stationed at Houston, Dallas, San Antonio, Kilgore, and Alice, Texas, and at New Iberia, Louisiana.

New Device Allows Diesels To Operate on Heavy Oils

A device making it possible for high-speed Diesel engines to operate satisfactorily on heavy and crude oils has been invented by Prof. Robert B. Rice, director of Diesel engineering at State College, Raleigh, North Carolina.

The invention, which is expected to provide more economical operation and wider application of Diesel engines in agricultural and industrial enterprises, involves a new type of mixing chamber in which it will be possible to derive more power and speed from an engine of a given size.

Heavy oils are cheaper and furnish more mileage than the lighter oils now in use. The crude oils cost about 4½ cents per gallon and will provide transportation or power at ½ and ⅛ the cost of the lighter oils and gasoline respectively, Rice said.

Moulden Services Are Named Sperry-Sun Representative

The Sperry-Sun Well Surveying Company, Philadelphia, announces that Moulden Oilfield Services, 329 S. McKinley Street, Casper, Wyoming, will be their representative in the Rocky Mountain territory. This district covers the states of North Dakota, South Dakota, Montana, Wyoming, Utah and Colorado, and the northwestern part of New Mexico.

The Moulden organization is headed by Carl Moulden, formerly associated with Manning & Brown.

Pittsburgh Equitable Meter Forms International Branch

Pittsburgh International Corporation, 7701 Empire State Building, New York, has been formed by Pittsburgh Equitable Meter Company. The new company will handle export sales and distribution of products manufactured by Pittsburgh Equitable Meter Company-Merco Nordstrom Valve Company, and subsidiaries. Activities of the company will begin September 1.

A. L. DiGiulian, vice president of the new organization, will direct its activities. He formerly was chief of the foreign communications section, Office of Exports, Foreign Economic Administration, in Washington.

George E. Doty, who will assist DiGiulian, joined Pittsburgh Equitable Meter Company in 1926. Before the war he was export manager and later was with the Merco-Nordstrom Valve Division at Oakland, California, as assistant to the general manager.

Wins Third Star

The Baker Manufacturing Company, Springfield, Illinois, manufacturer of bulldozers, has been awarded the third star for its Army-Navy E pennant, for excellence in production of wartime equipment.

Youngstown Honored

Youngstown Sheet and Tube Company, Youngstown, Ohio, has been awarded a third star to be added to its Army-Navy E pennant in the Chicago district.

Wins White Star

American Meter Company has been awarded a white star to add to the Army-Navy E flag for continued excellence in production of war equipment. The award was made at the Philadelphia plant.

McDowell Gets Award

McDowell Manufacturing Company, Millvale, Pennsylvania, has been awarded the Army-Navy E for outstanding production of war materials.

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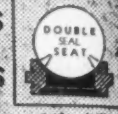

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